



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX

IN THE MATTER OF: )

**El Paso Merchant Energy-Petroleum Company** )

) U.S. EPA Docket No. 9-2007-01  
) UNILATERAL ADMINISTRATIVE  
) ORDER FOR THE PERFORMANCE  
) OF A REMOVAL ACTION

Proceeding Under Section 106(a)  
of the Comprehensive Environmental  
Response, Compensation, and  
Liability Act of 1980,  
42 U.S.C. § 9606(a).

This Order pertains to mining property located on Highway 20 approximately 24 miles west of Williams, California in Lake County, California, in sections 31 and 32, Township 14 North, Range 5 West, Mount Diablo Base and Meridian ("Property"). The Property consists of two mines, the Abbott Mine and Turkey Run Mine and their respective workings including tailings, ore piles and waste rock. This Order requires El Paso Merchant Energy-Petroleum Company ("Respondent") to conduct Removal Actions described herein to abate an imminent and substantial endangerment to the public health, welfare or the environment that may be presented by the actual or threatened release of hazardous substances at or from the Property.

**I. AUTHORITY**

1. This Unilateral Administrative Order ("Order") is issued pursuant to the authority vested in the President of the United States by Section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. § 9606(a), as

amended by the Superfund Amendments and Reauthorization Act of 1986, and the Small Business Liability Relief and Brownfields Revitalization Act of 2002 ("CERCLA"). The President delegated this authority to the Administrator of the United States Environmental Protection Agency ("EPA" or "Agency") by Executive Order 12580, January 23, 1987, 52 Fed. Reg. 2923, and further delegated it to the Assistant Administrator for Solid Waste and Emergency Response and the Regional Administrators by EPA Delegation Nos. 14-14-A and 14-14-B. This authority has been duly redelegated to the Branch Chief, Superfund Division, EPA Region 9 ("Branch Chief"), by delegations dated September 29, 1997, and November 16, 2001.

## **II. PARTIES BOUND**

2. This Order shall apply to and be binding on El Paso Merchant Energy-Petroleum Company, a subsidiary of El Paso Corporation. Respondent is jointly and severally responsible for carrying out all activities required by this Order. This Order shall be binding on Respondent and any agents, officers, employees, successors and assigns. Notwithstanding the terms of any contract or agreement, Respondent is responsible for compliance with this Order and for ensuring that their employees, contractors, and agents comply with this Order. Respondent is jointly and severally liable for carrying out all activities required by this Order.

3. No change in ownership or operational status will alter Respondent's obligations under this Order.

4. Notwithstanding the terms of any contract or agreement, Respondent is responsible for compliance with this Order and for ensuring that all employees, contractors, and agents comply with this Order. Respondent shall provide a copy of this Order to all contractors, subcontractors, and consultants that are retained by them to perform the work required by this Order within 2 working days after the Effective Date of this Order or within 2 working days of retaining their

services, whichever is later.

5. Respondent may not convey any title, easement, or other interest that they may have in any property comprising the Site, as the term "Site" is defined below, without a provision permitting the continuous implementation of the provisions of this Order. If Respondent wishes to transfer any title, easement, or other interest that they may have in any property comprising the Site, Respondent shall provide a copy of this Order to any subsequent owner(s) or successor(s) before any ownership rights are transferred. In such case, Respondent shall advise EPA no less than thirty (30) days prior to any anticipated transfer of interest.

### **III. DEFINITIONS**

6. Unless otherwise expressly provided herein, the terms used in this Order that are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in CERCLA or in such regulations. Whenever the terms listed below are used in this Order, or in the exhibits attached hereto and incorporated hereunder, the following definitions shall apply:

"Days" shall mean consecutive calendar days unless expressly stated otherwise.

"Working days" shall mean consecutive calendar days other than a Saturday, Sunday, or federal holiday. In computing any period of time under this Order where the last day would fall on a Saturday, Sunday, or federal holiday, the period shall run until the close of business of the next working day.

"CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986 and by the Small Business Liability Relief and Brownfields Revitalization Act of 2002.

"EPA" shall mean the United States Environmental Protection Agency and any successor departments or agencies of the United States.

"National Contingency Plan" or "NCP" shall mean the National Oil and Hazardous Substances Pollution Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300.

"Paragraph" shall mean a portion of this Order identified by an Arabic numeral.

"Property" shall mean the area in and around what is known as the Abbott Mine and Turkey Run Mine, Lake County, California.

"Removal Action Memorandum" or "Action Memorandum" shall mean the EPA Region 9 Superfund decision document, dated October 6, 2006 and signed by Daniel A. Meer, which selected CERCLA response actions for the Property. The Removal Action Memorandum is included in this Order as Appendix A.

"Response Action" or "Removal Action" shall be those specific work items Respondent is required to perform at the Site pursuant to this Order, as set forth in Section IX of this Order.

"Section" shall mean a portion of this Order identified by a Roman numeral, unless otherwise stated.

"Site" shall mean the Abbott Mine and Turkey Run Mine, Lake County, California, in addition to any associated personal property, such as motor vehicles, trailers, containers, and other real property at which hazardous substances exist from the operation of the mines.

"State" shall mean the state of California, and all of its political subdivisions, including the Central Valley Regional Water Quality Control Board.

"Unilateral Order" or "Order" shall mean this Unilateral Administrative Order, EPA docket number 9-2007-01, and any exhibits attached hereto. In the event of a conflict between this Order and any exhibit, this Order shall control.

"United States" shall mean the United States of America.

#### **IV. FINDINGS OF FACT**

##### **7. Site description**

The Site consists of two abandoned mercury mines located in the Sulfur Creek Mining District, Lake County, California, along Highway 20, approximately 24 miles west of Williams, California and 10 miles east of Clear Lake. The Site occupies approximately 424 acres of land. The Site is currently owned by several tenants in common.

The Abbott and Turkey Run mines were operated intermittently between 1870 and 1971. The Abbott Mine, the largest producer in the district, has between one and two miles of underground workings distributed over a 500-ft. vertical interval. These underground workings historically connected to the underground workings at the Turkey Run Mine that is immediately adjacent to the Abbott Mine. Ore from Turkey Run was reportedly transported to the Abbott Mine for processing. Calcined tailings, ore and waste rock were observed at both mines. Up to 137,000 cubic yards ("CY") of waste rock is estimated to be present at the open cuts at both mines. Mine roads were constructed with tailings. At Turkey Run Mine, approximately 3,200 CY of ore is estimated around the ore bin. The Abbott mine has the largest calcined tailings pile in the district, estimated at 173,000 CY. Glory Hole Gulch, a creek which flows north to south bisects the two mine sites. The gulch was diverted at the Abbott Mine just below a collapsed adit, apparently with the intent to prevent sheet flow through the tailings pile. Downstream check dams also divert Glory Hole Gulch through the eastern end of the Abbott mine's tailings

pile, adjacent to Highway 20. This diversion also routes water through the ore pile at Turkey Run Mine. Both diversions have the effect of routing water from Glory Hole Gulch through mercury impacted mine wastes at the Site to the west branch of Harley Gulch, an ephemeral stream.

#### 8. Site ownership and operation

The current owners as tenants in common of the Property are Dorothy and Bruce MacLean, Jill Eliel, Joyce McDowell, Ronald E. Cliff, George Cliff, and Constance J. Venturi.. Colorado Oil and Gas, a predecessor of El Paso Merchant Energy-Petroleum Company, was a previous owner and operator of the Property.

#### 9. Release Characteristics

On April 25, 2006, U.S. EPA and START conducted a walkthrough of the Site to identify mine features for screening sampling and analysis. Four screening units were identified: 1) Turkey Run Waste Rock Pile; 2) Vicinity of Process Buildings (Abbott Mine); 3) Abbott Mine Tailings Pile; and 4) Turkey Run Ore Bin area. A total of 40 analytical samples, plus appropriate quality assurance/quality control samples, were collected from each of these four units and submitted for total mercury analysis and statistical correlation analysis using x-ray fluorescence spectroscopy (XRF), with laboratory confirmation provided by U.S. EPA's Region 9 Laboratory. The range of data reported from 5.4 to 12,000 mg/kg concentration of total mercury. In July 2006, USEPA documented high metallic mercury vapor readings at the site using a portable mercury vapor analyzer (Lumex). When metallic mercury vapors are inhaled, they readily enter the bloodstream and are carried throughout the body and can move into the brain and in turn, affect the nervous system.

Mercury is a naturally occurring element, and can be detected in background

concentrations. The mercury analytical values found at the site are many times higher than background. Analytical results indicate that concentrations of heavy metals identified in these media, exceed background and regulatory levels including U.S. EPA's Preliminary Remediation Goals (PRGs). Mercury is a hazardous substance as defined by Section 101(14) of CERCLA. Mercury exposure occurs from breathing air contaminated with mercury, ingesting contaminated water and food. Mercury, at high levels of exposure, may cause damage to the brain, kidneys and developing fetus. Effects on brain functioning may result in irritability, tremors, changes in vision or hearing, and memory problems. The nervous system is very sensitive to all forms of mercury. Short-term exposure to high levels of mercury vapors can cause lung damage, nausea, vomiting, diarrhea, increased blood pressure or heart rate, skin rashes and eye irritation. Young children are more sensitive to mercury than adults (ATSDR 1999.)

The toe of the large calcined tailings pile is being actively undercut by Harley Gulch and is releasing mercury bearing mining waste rock and sediments into the stream. Mercury can also be released with dust generated at the site. These air borne particulates can be deposited into the waterways as well as pose an inhalation/ingestion risk to human health.

Mine tailings at the Site are readily accessible to persons that utilize the area for recreational purposes. The Site is situated in between a well traveled state highway (Highway 20) and the Indian Valley/Walker Ridge Recreation Area. There is one person living on the site. Recreational activities in the vicinity of the Site include hunting, hiking, biking, use of all-terrain vehicles, and camping. The Site may be considered an attractive nuisance because of its unique appearance. Physical characteristics of the Site, such as the possibility of slope failure, also pose significant hazards to casual users of the Site.

High concentrations of metals in sediments has likely manifested in toxic impacts on aquatic life

in the Harley Gulch and within Cache Creek, further downstream. Wildlife may also be exposed to hazardous substances in fine-grained tailings and waste rock via the ingestion and inhalation pathways. Harley Gulch is a State of California impaired water body, listed under the Clean Water Act Section 303(d) for mercury. Harley Gulch is a tributary of Cache Creek. Cache Creek flows to the Sacramento River, then to the Sacramento-San Joaquin Bay-Delta, and ultimately to San Francisco Bay.

The administrative record supporting this action is available for review at the EPA, Region 9 offices located at 75 Hawthorne Street, San Francisco, California.

#### **V. CONCLUSIONS OF LAW**

10. The Site is a "facility" as that term is defined in Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

11. El Paso Merchant Energy-Petroleum Company is a "person" as that term is defined in Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

12. The Respondent is a responsible party under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a), and is jointly and severally liable for performance of response action and for response costs incurred and to be incurred at the Site. Respondent's companies, COG Minerals and Colorado Oil and Gas, owned and operated the Site from approximately 1958 to 1961 and was responsible for mining activities carried out at the Abbott and Turkey Run mines. Respondent is "liable" within the meaning of Section 107(a) of CERCLA, 42 U.S.C. § 9607(a)(1) and (2), and are subject to this Order under Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

13. The toxic materials identified in the Action Memorandum are "hazardous substances" as that term is defined in Section 101(14) of CERCLA, 42 U.S.C. § 9601(14) and by meeting requirements set forth in 40 C.F.R. § 261.24. Hazardous substances disposed or dumped



at or around the Property constitute a "release," as that term is defined in Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

14. The actual or threatened release of hazardous substances from the Site constitutes an imminent and substantial endangerment to the public health or welfare or the environment, within the meaning of Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

## **VI. DETERMINATIONS**

Based on the Findings of Fact and the Conclusions of Law stated herein, the Branch Chief has made the following determinations:

15. That an actual or threatened release of hazardous substances from the Site presents an imminent and substantial endangerment to the public health or welfare or the environment.

16. That conditions at the Site constitute a threat to public health or welfare or the environment based on consideration of the factors stated in the NCP at 40 C.F.R. § 300.415(b), and that the actions required by this Order are necessary to protect the public health or welfare or the environment.

17. That the removal action required by this Order, if properly performed, will be consistent with the NCP and CERCLA, and is appropriate to protect the public health or welfare or the environment.

## **VII. NOTICE TO THE STATE**

18. Pursuant to Section 106(a) of CERCLA, 42 U.S.C. § 9606(a), EPA has notified the State of the issuance of this Order by providing a copy of this Order.

## **VIII. EFFECTIVE DATE**

19. This Order is deemed effective on receipt (the "Effective Date"), unless a

conference is requested as provided herein. If such a conference is requested, this Order shall be effective the second day following the day of such conference unless modified in writing by EPA.

#### **IX. ORDER**

20. Based on the Findings of Fact, Conclusions of Law, and Determinations, EPA hereby orders Respondent to perform the specific work set forth below under the direction of the EPA On Scene Coordinator ("OSC"), as designated in Section XIV, and to comply with all requirements of this Order until EPA provides notice that the Response Action is complete.

##### **A. Work to be Performed**

21. Respondent shall immediately restrict access to the Property for the duration of the response action required by this Order, Respondent shall not allow any soil or waste material to be removed from or brought into the Property at the Site without prior EPA approval.

22. Within 2 days after the Effective Date of this Order, Respondent shall submit to EPA for approval, a Work Plan for the removal of hazardous substances from the Site. The Work Plan shall provide a concise description of the activities to be conducted to comply with the requirements of this Order, and shall include a proposed schedule for implementing and completing such activities. The Work Plan, which will be subject to EPA approval, shall comply with the requirements provided in Paragraphs 24-27 below, and at a minimum, shall require the Respondent to perform and complete the following removal activities beginning within 10 days of EPA approval of the Work Plan:

- A) Remove and/or stabilize tailings and sediment from the west branch of Harley Gulch and portions of Glory Hole Gulch to prevent further downstream and/or offsite migration of mercury bound sediment or fines;

- B) Grading and bank stabilization measures may be implemented as necessary to abate the release of tailings into the waterway;
- C) Remove and dispose of mercury-impacted process equipment and/or structures posing actual or threat of release at the Site including condensers, wooden troughs, bricks;
- D) Ensure process equipment and structures (such as the rotary kiln) remaining are permanently sealed precluding further releases;
- E) Install new and/or repair existing erosion and drainage controls including but not limited to dams, velocity breaks and sedimentation basins, at Glory Hole Gulch to route overland sheetflow outside of the tailings footprint;
- F) Excavate/grade/cap existing impacted soils and tailings piles as necessary to prevent future slope failure into the Harley Gulch;
- G) Mitigate the threat of future releases of hazardous substances within the tailings and waste rock using a possible combination of three options: disposal off site; restaging and capping on site; and capping in place. Site grading and bank stabilization techniques may be used to abate the release of tailings deposits within or in close proximity to the stream channel.
- H) Perform sampling and analysis during appropriate phases of the removal action to evaluate the effectiveness of the removal measures in preventing or limiting mercury releases to the watershed. Use operational controls such as dust containment or suppression to abate fugitive dust emissions. The project Health and Safety Plan meeting OSHA's criteria 29 C.F.R. § 1910.120 must be maintained at the Site during all phases of the response.

23. Within 3 days of the Effective Date of this Order, the Respondent shall provide EPA with documentation that adequately demonstrates its financial ability to complete the work to be performed pursuant to this Order. Examples of adequate financial documentation that EPA may accept include, but are not limited to, a signed contract or guarantee on the part of the Respondent's contractor that it will complete the work to be performed (including payment terms, such as whether the contract is prepaid), an irrevocable letter of credit payable to EPA from a financial institution, a policy of insurance covering site Response Actions and contingent claims that provides EPA with acceptable rights as a beneficiary thereof, an escrow account for the value of the work to be performed; or a demonstration by the Respondent that they have adequate net worth and /or cash flow to pay for the work to be performed (which may include financial statements, auditors' reports, and the like).

24. The Work Plan required in Paragraph 22 shall be reviewed by EPA, which may approve, disapprove, require revisions, or modify the Work Plan. Respondent shall prepare the Work Plan elements described below as separate documents for approval by EPA. Once approved, each element of the Work Plan shall be deemed to be incorporated into and made a fully enforceable part of this Order. The Respondent shall implement the Work Plan as finally approved by the EPA. In addition to the requirements listed in Paragraph 22, the Work Plan shall include:

- A) A Health & Safety Plan, prepared in accordance with EPA's Superfund Standard Operating Safety Guide, dated June 1992, which complies with all current OSHA regulations applicable to Hazardous Waste Operations and Emergency Response, 29 C.F.R. Part 1910. Respondent shall incorporate all changes to the Health & Safety Plan recommended by EPA and implement the Health & Safety Plan throughout the

performance of the removal action; and

B) A Quality Assurance Project Plan ("QAPP") that is consistent with EPA Guidance for Quality Assurance Project Plans (EPA QA/G-5); Preparation of a U.S. EPA Region 9 Field Sample Plan for EPA-Lead Superfund Projects (Document Control No.: 9QA-05-93); and Guidance for the Data Quality Objectives Process (EPA QA/G-4). Soil sampling activities shall utilize proper soil assessment techniques as defined in EPA Document SW-846, Chapter 9 (EPA Environmental Response Team Standard Operating Procedures) or appropriate ASTM standards.

25. Respondent shall provide EPA with a written report on completion of the transportation of hazardous substances or wastes for disposal or recycling. This report should contain a summary of the activities to comply with this Order. Within twenty-one (21) days after completing the Response Action, Respondent shall provide EPA with this final summary report, which also shall include all invoices submitted by contractors (which shall identify specific work performed), and copies of all analytical data generated during the response action.

26. All documents, including technical reports, and other correspondence to be submitted by the Respondent pursuant to this Order, shall be sent by over-night mail to the following addressees or to such other addressees as EPA hereafter may designate in writing, and shall be deemed submitted on the date received by EPA.

Janet Yocum, Federal On-Scene Coordinator  
US Environmental Protection Agency  
EPA, Region 9, SFD-9-2  
75 Hawthorne Street  
San Francisco, CA 94105

Respondent shall submit two (2) copies of each document to EPA.

27. EPA will review, comment, and approve or disapprove each plan, report, or other

deliverable submitted by Respondent. All EPA comments on draft deliverables shall be incorporated by the Respondent. EPA will notify the Respondent in writing of EPA's approval or disapproval of a final deliverable. In the event of any disapproval, EPA will specify the reasons for such disapproval, EPA's required modifications, and a time frame for submission of the revised report, document, or deliverable. If the modified report, document or deliverable is again disapproved by EPA, EPA first shall notify the Respondent of its disapproval of the resubmitted report, document, or deliverable, and then may draft its own report, document or deliverable and incorporate it as part of this Order, may seek penalties from the Respondent for failing to comply with this Order, and may conduct the remaining work required by this Order and seek to recover costs from Respondent.

28. For purposes of this Order, EPA's authorized representatives will include, but not be limited to, consultants and contractors hired by EPA to oversee the activities required by this Order.

B. Selection of Contractor(s) and Subcontractor(s)

29. All work performed by or on behalf of Respondent pursuant to this Order shall be performed by qualified individuals or contractors with expertise in hazardous waste site investigation or remediation, unless agreed otherwise by EPA. Respondent shall, within 3 days after the Effective Date of this Order, notify EPA in writing of the name, title and qualifications of the individual(s) who will be responsible for carrying out the terms of this Order, and the name(s) of any contractor(s) or subcontractor(s). The qualifications of the persons, contractors, and subcontractors undertaking the work for Respondent shall be subject to EPA review and approval.

30. If EPA disapproves of any person's or contractor's technical or work-experience

qualifications, EPA will notify the Respondent in writing. Respondent shall, within three (3) working days of Respondent's receipt of EPA's written notice, notify EPA of the identity and qualifications of the replacement(s). Should EPA disapprove of the proposed replacement(s), Respondent shall be deemed to have failed to comply with the Order.

31. Respondent may propose to change the individual(s), contractor(s), or subcontractor(s) retained to direct and supervise the work required by this Order. If Respondent wishes to propose such a change, Respondent shall notify EPA in writing of the name, title, and qualifications of the proposed individual(s), proposed contractor(s), or proposed subcontractor(s), and such individual(s), contractor(s) or subcontractor(s) shall be subject to approval by EPA in accordance with the terms of Paragraphs 29 and 30, above. The naming of any replacement(s) by Respondent shall not extend any deadlines required by this Order nor relieve the Respondent of any of their obligations to perform the work required by this Order.

32. Respondent will notify EPA of the respective field activities at least seventy-two (72) hours before initiating them so that EPA may adequately schedule oversight tasks.

33. Respondent shall submit to EPA a certification that Respondent or its contractor(s) and subcontractor(s) have adequate insurance coverage or other ability, subject to approval of EPA, to compensate for liabilities for injuries or damages to persons or property that may result from the activities to be conducted by or on behalf of Respondent pursuant to this Order. Adequate insurance shall include comprehensive general liability insurance and automobile insurance with limits of one million dollars, combined single limit. If the Respondent demonstrates by evidence satisfactory to EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance covering the same risks but in a lesser amount, then the Respondent needs to provide only that portion of the insurance

described above that is not maintained by such contractor or subcontractor. Respondent shall ensure that such insurance or indemnification is maintained for the duration of performance of the work required by this Order. Respondent shall ensure that the United States is named as an additional insured on any such insurance policies.

C. General Provisions:

34. All work required by this Order shall be conducted in accordance with: CERCLA; the NCP; EPA Region 9 "Guidance for Preparing Quality Assurance Project Plans for Superfund Remedial Projects" (EPA, November 1992); any final amended or superseding versions of such documents provided by EPA; other applicable EPA guidance documents; any Work Plan or individual components approved pursuant to Paragraph 24 of this Order; and any report, document or deliverable prepared by EPA because Respondent failed to comply with this Order.

35. All plans, schedules, and other reports that require EPA's approval and are required to be submitted by the Respondent pursuant to this Order shall, after approval by EPA, be incorporated into and enforceable under this Order.

36. EPA will oversee Respondent's activities as specified in Section 104(a)(1) of CERCLA, 42 U.S.C. § 9604(a)(1). Respondent will support EPA's initiation and implementation of activities needed to carry out its oversight responsibilities. Respondent also shall cooperate and coordinate the performance of all work required to be performed under this Order with all other work being performed at the Site, including work performed by EPA, the State, or any other party performing work at the Site with the approval of EPA.

37. Respondent shall perform all actions required pursuant to this Order in accordance with all applicable local, state, and federal laws and regulations except as provided in Section 121(e) of CERCLA, 42 U.S.C. § 6921(e), and 40 C.F.R. §§ 300.400(e) and 300.415(j). In



accordance with 40 C.F.R. § 300.415(j), all on-Site actions required pursuant to this Order shall, to the extent practicable, as determined by EPA, considering the exigencies of the situation, attain applicable or relevant and appropriate requirements under federal environmental or state environmental or facility siting laws.

**X. NOTICE OF INTENT TO COMPLY**

38. Respondent shall, within three (3) working days of the Effective Date of this Order, provide written notice to EPA of Respondent's irrevocable intent to comply with this Order. Failure to respond, or failure to agree to comply with this Order, shall be deemed a refusal to comply with this Order. Such written notice shall be sent to:

Larry Bradfish  
Office of Regional Counsel  
United States Environmental Protection Agency  
75 Hawthorne Street, Mailcode ORC-3  
San Francisco, CA 94105  
Telephone: 415-972-3934  
Fax: 415-947-3571

**XI. OPPORTUNITY TO CONFER**

39. Respondent may, within two (2) days of receipt of this Order, request a conference with the Section Chief of the Emergency Response Section in the Response, Planning and Assessment Branch in the EPA Region 9 Superfund Division, or whomever the Section Chief may designate. If requested, the conference shall occur within three (3) days of the request, unless extended by mutual agreement of the Parties, at EPA's Regional Office, 75 Hawthorne Street, San Francisco, California.

40. At any conference held pursuant to Respondent's request, the Respondent may appear in person, or be represented by an attorney or other representative. If Respondent desires such a conference, Respondent shall contact Larry Bradfish, Assistant Regional Counsel, at (415)

41. The purpose and scope of any such conference held pursuant to this Order shall be limited to issues involving the implementation of the Response Action required by this Order and the extent to which Respondent intends to comply with this Order. If such a conference is held, the Respondent may present any evidence, arguments or comments regarding this Order, its applicability, any factual determinations on which the Order is based, the appropriateness of any action that the Respondent is ordered to take, or any other relevant and material issue. Any such evidence, arguments or comments should be reduced to writing and submitted to EPA within three (3) days following the conference. This conference is not an evidentiary hearing, and does not constitute a proceeding to challenge this Order. It does not give Respondent a right to seek review of this Order, or to seek resolution of potential liability, and no official record of the conference will be made. If no conference is requested, any such evidence, arguments or comments must be submitted in writing within three (3) days following the Effective Date of this Order. Any such writing should be directed to the following address:

Larry Bradfish  
Office of Regional Counsel  
Environmental Protection Agency  
75 Hawthorne Street, ORC-3  
San Francisco, CA 94105

42. Respondent is hereby placed on notice that EPA will take any action that may be necessary in the opinion of EPA for the protection of public health and welfare and the environment, and Respondent may be liable for the costs of those actions under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a).

## **XII. ENDANGERMENT AND EMERGENCY RESPONSE**

43. In the event of any action or occurrence during the performance of the work that

causes or threatens to cause a release of a hazardous substance or that may present an immediate threat to public health or welfare or the environment, Respondent shall immediately take all appropriate action(s) to prevent, abate, or minimize the threat, and shall immediately notify EPA's primary OSC, or, if the primary OSC is unavailable, EPA's alternate OSC, as designated below in Paragraph 49. If neither of these persons is available, Respondent shall notify the EPA Emergency Response Unit, Region 9, by calling (800) 300-2193. Respondent shall take such action(s) in consultation with EPA's OSC and in accordance with all applicable provisions of this Order, including but not limited to the approved Health & Safety Plan.

44. Nothing in the preceding Paragraph shall be deemed to limit any authority of the United States to take, direct, or order all appropriate action to protect human health and the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances at or from the Site.

### **XIII. MODIFICATION OF WORK REQUIRED**

45. In the event of unanticipated or changed circumstances at the Site, Respondent shall notify the EPA OSC by telephone within twenty-four (24) hours of discovery of the unanticipated or changed circumstances. This verbal notification shall be followed by written notification postmarked no later than within three (3) days of discovery of the unanticipated or changed circumstances.

46. The Branch Chief may determine that in addition to tasks addressed herein, additional work may be required to address the unanticipated or changed circumstances referred to in Paragraphs 43 and 45. Where consistent with Section 106(a) of CERCLA, the Branch Chief may direct, as an amendment to this Order, that Respondent perform these tasks in addition to those required herein. Respondent shall implement the additional tasks that the Branch Chief

identifies. The additional work shall be completed according to the standards, specifications, and schedules set forth by the Branch Chief in any modifications to this Order.

#### **XIV. DESIGNATED PROJECT MANAGERS**

47. EPA designates Janet Yocum, an employee of EPA Region 9, as its primary OSC and designated representative at the Site, who shall have the authorities, duties, and responsibilities vested in the OSC by the NCP. This includes, but is not limited to, the authority to halt, modify, conduct, or direct any tasks required by this Order or undertake the Response Action (or portions of the Response Action) when conditions at the Site present or may present a threat to public health or welfare or the environment as set forth in the NCP. Within three (3) days of the Effective Date of this Order, Respondent shall designate a Project Coordinator who shall be responsible for overseeing Respondent's implementation of this Order. To the maximum extent possible, all oral communications between Respondent and EPA concerning the activities performed pursuant to this Order shall be directed through EPA's OSC and Respondent's Project Coordinator. All documents, including progress and technical reports, approvals, and other correspondence concerning the activities performed pursuant to the terms and conditions of this Order, shall be delivered in accordance with Paragraph 26, above.

48. EPA and Respondent may change their respective OSC and Project Coordinator. Notification of such a change shall be made by notifying the other party in writing at least five (5) days prior to the change, except in the case of an emergency, in which case notification shall be made orally followed by written notification as soon as possible.

49. Consistent with the provisions of this Order, the EPA designates Peter Guria as an alternate OSC, in the event Janet Yocum is not present at the Site or is otherwise unavailable.

During such times, Peter Guria shall have the authority vested in the OSC by the NCP, as set forth in Paragraph 47 above.

50. The absence of the EPA OSC from the Site shall not be cause for the stoppage of work. Nothing in this Order shall limit the authority of the EPA OSC under federal law.

#### **XV. SITE ACCESS**

51. Respondent shall permit EPA and its authorized representatives, including its contractors and the State, to have access at all times to the Site to monitor any activity conducted pursuant to this Order and to conduct such tests or investigations as EPA deems necessary. Nothing in this Order shall be deemed a limit on EPA's authority under federal law to gain access to the Site.

52. To the extent that Respondent requires access to property other than Property that they own to carry out the terms of this Order, Respondent shall, within a reasonable time to implement the requirements of this Order, obtain access for: EPA, its contractors, oversight officials, or other authorized representatives; state oversight officials or contractors; and Respondent and its authorized representatives. If Respondent fails to gain access within the time period necessary to implement the requirements of this Order, Respondent shall continue to use best efforts to obtain access until access is granted. For purposes of this Paragraph, "best efforts" include, but are not limited to, the payment of money as consideration for access. If access is not provided within the time referenced above, EPA may obtain access under Sections 104(e) or 106(a) of CERCLA and recover any costs incurred pursuant to Section XVI of this Order.

#### **XVI. REIMBURSEMENT OF OVERSIGHT COSTS**

53. Respondent shall reimburse EPA, on written demand, for all response costs incurred by the United States in overseeing Respondent's implementation of the requirements of

this Order, unless otherwise exempted from this requirement by federal law. EPA may submit to Respondent on a periodic basis a bill for all response costs incurred by the United States with respect to this Order. Respondent shall, within thirty (30) days of receipt of the bill, remit by cashier's or certified check for the amount of those costs made payable to the "Hazardous Substance Superfund," to the following address:

U.S. Environmental Protection Agency  
Region 9 Superfund  
P.O. Box 371099M  
Pittsburgh, PA 15251

Respondent shall send a cover letter with any check and the letter shall identify the Abbott Mine/Turkey Run Site by name and make reference to this Order, including the EPA docket number stated above. Respondent shall send notification of any amount paid, including a photocopy of the check, simultaneously to the EPA OSC.

54. Interest at the rate established under Section 107(a) of CERCLA shall begin to accrue on the unpaid balance from the due date of the original demand notwithstanding any dispute or objection to any portion of the costs.

#### **XVII. DELAY IN PERFORMANCE**

55. Any delay in the performance of any requirement of this Order that, in the EPA's sole judgment and discretion, is not properly justified by Respondent under the terms of this Section shall be considered a violation of this Order. Any delay in performance of any requirement of this Order shall not affect any other obligation of Respondent under the terms and conditions of this Order.

56. Respondent shall notify EPA of any delay or anticipated delay in performing any requirement of this Order. Such notification shall be made by telephone to EPA's primary OSC

within twenty-four (24) hours after Respondent first knew or should have known that a delay might occur. Respondent shall adopt all reasonable measures to avoid or minimize any such delay. Within three (3) days after notifying EPA by telephone, Respondent shall provide written notification fully describing the nature of the delay, any justification for delay, any reason why the Respondent should not be held strictly accountable for failing to comply with any relevant requirements of this Order, the measures planned and taken to minimize the delay, and a schedule for implementing the measures that will be taken to mitigate the effect of the delay. Increased costs or expenses associated with implementation of the activities called for in this Order are not justifications for any delay in performance.

57. If Respondent is unable to perform any activity or submit any document within the time required under this Order, the Respondent may, prior to the expiration of the time, request an extension of time in writing. The extension request shall include a justification for the delay. The submission of an extension request shall not itself affect or extend the time to perform any of Respondent's obligations under this Order.

58. If EPA determines that good cause exists for an extension of time, it may grant a request made by Respondent pursuant to Paragraph 57 above, and specify in writing to the Respondent the new schedule for completion of the activity or submission of the document for which the extension was requested.

#### **XVIII. RECORD PRESERVATION**

59. Respondent shall maintain, during the pendency of this Order, and for a minimum of five (5) years after EPA provides notice to Respondent that the work has been completed, a depository of the records and documents required to be prepared under this Order. In addition, Respondent shall retain copies of the most recent version of all documents that relate to

hazardous substances at the Site and that are in their possession or in the possession of their employees, agents, contractors, or attorneys. After this five-year period, Respondent shall notify EPA at least thirty (30) days before the documents are scheduled to be destroyed. If EPA so requests, Respondent shall provide these documents to EPA.

#### **XIX. ENFORCEMENT AND RESERVATIONS**

60. EPA reserves the right to bring an action against Respondent under Section 107 of CERCLA, 42 U.S.C. § 9607, for recovery of any response costs incurred by the United States related to this Order or otherwise incurred at the Site and not reimbursed by Respondent. This reservation shall include but not be limited to past costs, direct costs, indirect costs, the costs of oversight, and the costs of compiling the cost documentation to support oversight costs, as well as accrued interest as provided in Section 107(a) of CERCLA, 42 U.S.C. § 9607(a).

61. Notwithstanding any other provision of this Order, at any time during the Response Action, EPA may perform its own studies, complete the Response Action (or any portion of the Response Action) and seek reimbursement from Respondent for its costs, or seek any other appropriate relief.

62. Nothing in this Order shall preclude EPA from taking any additional enforcement action, including modification of this Order or issuance of additional Orders, or additional remedial or removal actions as EPA may deem necessary, or from requiring Respondent in the future to perform additional activities pursuant to CERCLA, 42 U.S.C. § 9607(a), et seq., or any other applicable law. Respondent may be liable under CERCLA Section 107(a) for the costs of any such additional actions.

63. Notwithstanding any provision of this Order, the United States hereby retains all of its information gathering, inspection and enforcement authorities and rights under CERCLA,



the Resource Conservation and Recovery Act, or any other applicable statutes or regulations.

64. Notwithstanding compliance with the terms of this Order, including the completion of the EPA-approved Response Action, Respondent is not released from liability, if any, for any enforcement actions beyond the terms of this Order taken by EPA.

65. EPA reserves the right to take any enforcement action pursuant to CERCLA or any other legal authority, including the right to seek injunctive relief, monetary penalties, reimbursement of response costs, and punitive damages for any violation of law or this Order.

66. EPA expressly reserves all rights and defenses that it may have, including the EPA's right both to disapprove of work performed by Respondent and to request the Respondent to perform tasks in addition to those detailed in Section IX of this Order.

67. This Order does not release Respondent from any claim, cause of action or demand in law or equity, including, but not limited to, any claim, cause of action, or demand that lawfully may be asserted by representatives of the United States or the State.

68. No informal advice, guidance, suggestions, or comments by EPA regarding reports, plans, specifications, schedules, and any other writing submitted by Respondent will be construed as relieving Respondent of its obligation to obtain such formal approval as may be required by this Order.

## **XX. SEVERABILITY**

69. If any provision or authority of this Order or the application of this Order to any circumstance is held by a court to be invalid, the application of such provision to other circumstances and the remainder of this Order shall not be affected thereby, and the remainder of this Order shall remain in force.

## **XXI. DISCLAIMER**

70. The United States, by issuance of this Order, assumes no liability for any injuries or damages to persons or property resulting from acts or omissions by Respondent, or its employees, agents, successors, assigns, contractors, or consultants in carrying out any action or activity pursuant to this Order. Neither EPA nor the United States shall be held as a party to any contract entered into by Respondent, or its employees, agents, successors, assigns, contractors, or consultants in carrying out any action or activity pursuant to this Order. This Order does not constitute a pre-authorization of funds under section 111(a)(2) of CERCLA, 42 U.S.C. § 9611(a)(2).

## **XXII. PENALTIES FOR NONCOMPLIANCE**

71. Respondent is advised pursuant to Section 106(b) of CERCLA, 42 U.S.C. § 9606(b), that violation of this Order or subsequent failure or refusal to comply with this Order, or any portion thereof, may subject Respondent to a civil penalty of up to \$32,500 per day for each day in which such violation occurs, or such failure to comply continues. Failure to comply with this Order, or any portion thereof, also may subject Respondent to liability for punitive damages in an amount three times the amount of any cost incurred by the government as a result of the failure of Respondent to take proper action, pursuant to Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3).

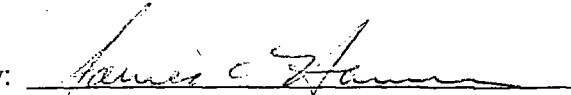
## **XXIII. TERMINATION AND SATISFACTION**

72. The provisions of this Order shall be deemed satisfied on Respondent's receipt of written notice from EPA that Respondent has demonstrated to the satisfaction of EPA that all of the terms of this Order, including any additional tasks that EPA has determined to be necessary, have been completed.

IT IS SO ORDERED:

UNITED STATES  
ENVIRONMENTAL PROTECTION AGENCY

By:



Date:

10/6/06

*for*

Daniel A. Meer

Branch Chief, Response, Planning and Assessment Branch  
EPA, Region 9

**EPA Region 9 Contacts:**

Janet Yocum, Federal On-Scene Coordinator  
Superfund Division  
EPA, Region 9, SFD-9-2  
75 Hawthorne Street  
San Francisco, CA 94105  
(414) 972-3053

Larry Bradfish, Assistant Regional Counsel  
Office of Regional Counsel  
EPA, Region 9, ORC-3  
75 Hawthorne Street  
San Francisco, CA 94105  
(415) 972-3934

## **APPENDIX A**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
75 Hawthorne Street  
San Francisco, CA 94105

**MEMORANDUM**

**DATE:** OCT 06 2008

**SUBJECT:** Request for a Time-Critical Removal Action at Abbott/Turkey Run Mines, Wilbur Springs, Lake County, California

**FROM:** Janet Yocum, On-Scene Coordinator  
Emergency Response Section (SFD-9-2)

**THROUGH:** Peter Guria, Chief  
Emergency Response Section (SFD-9-2)

**TO:** Daniel Meer, Chief  
Response, Planning & Assessment Branch (SFD-9)

**I. PURPOSE**

The purpose of this Action Memorandum is to obtain approval to spend up to \$ 1,946,733 to mitigate threats to human health and the environment posed by the presence of mercury mine wastes at the Abbott and Turkey Run Mines ("Site"). Both mercury mines are part of the Sulfur Creek Mining District, Lake County, California. The Site is located approximately 24 miles west of Williams, Lake County, California. The proposed removal of hazardous substances would be taken pursuant to Section 104(a)(1) of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. § 9604(a)(1), and Section 300.415 of the National Oil and Hazardous Substances Pollution Contingency Plan ("NCP"), 40 CFR § 300.415.

**II. SITE CONDITIONS AND BACKGROUND**

Site Status: Non-NPL  
Category of Removal: Time-Critical  
CERCLIS ID: CAN000908401  
SITE ID: 09PA

**A. Site Description**

## **1. Physical Location**

The Site is situated immediately north of and adjacent to Highway 20, approximately 24 miles west of Williams, Lake County, California. The geographic coordinates of the Site are 39° 1' 22" North latitude and 122° 26' 44" West longitude. See Appendix A, "Figure 1, Site Location Map". The Abbott and Turkey Run mines are located in Sections 31 and 32, Township 14 North, Range 5 West, Mount Diablo Base and Meridian (MDBM) and range in elevation between 1,678 to 1,992 feet above mean sea level (amsl).

There are two roads into the Abbott property, one accessible from Walker Ridge Road, a BLM maintained road that runs north from Highway 20, at the west end of the mine and a paved road located east of Walker Ridge Road/Highway 20 intersection along Highway 20. The paved road leads into a squatter's encampment, that includes a number of travel trailers, cars, sheds and debris.

Access to the Turkey Run property is by foot trail, heading north from Highway 20.

## **2. Site characteristics**

The Sulfur Creek Mining District is located about 60 miles northwest of Sacramento and 10 miles east of Clear Lake, in the central part of the Wilbur Springs 7.5-minute Quadrangle (Fig. 1). The Abbott and Turkey Run mercury (Hg) mines were intermittently operated 1870 to 1971. The Abbott Mine, the largest producer in the district, has between one and two miles of underground workings distributed over a 500-ft. vertical interval. These underground workings historically connected to the underground workings at the Turkey Run Mine that is immediately adjacent to the Abbott mine. Ore from Turkey Run was reportedly transported to the Abbott mine for processing. (Tetra Tech, 2003).

The main areas of concern for this Site include process equipment and process areas, calcined tailings and unnamed tributaries of Harley Gulch that mobilize sediment through the site to the ephemeral stream, Harley Gulch. The entire site is unfenced and situated between a major highway and the Indian Valley/Walker Ridge Recreation Area, a Bureau of Land Management (BLM) property, and is accessible to the public from all approaches.

Process-related equipment remaining at Abbott include a materials handling unit above the mill building, within the mill building is a rotary furnace and retorts, and immediately adjacent on a concrete pad are vertical condensers and wooden troughs. Additional features, such as concrete pads, fire brick piles, remnants of furnaces and destroyed/abandoned structures are located near or within the process area. The only processing equipment remaining at Turkey Run is an ore-bin, adjacent to a lower adit.

Calcined tailings, ore and waste rock were observed at both mines. Up to 137,000 cubic yard ("CY") of waste rock is estimated to be present at the open cuts at both mines. Mine roads were constructed with tailings. At Turkey Run Mine, approximately 3,200 CY of ore is estimated around the ore bin. The Abbott mine has the largest calcined tailings pile in the district, estimated at 173,000 CY. (Tetra Tech, 2003).

Glory Hole Gulch flows north to south and bisects the two mine sites. The gulch was diverted at Abbott just below a collapsed adit, intending to prevent sheet flow through the tailings pile. Downstream check dams also diverts Glory Hole Gulch through the eastern end of the Abbott mine's tailings pile, adjacent to Highway 20. This diversion also routes water through the ore pile at Turkey Run Mine. Both diversions have the effect of routing water from Glory Hole Gulch through mercury impacted mine wastes at the Site to the west branch of Harley Gulch, an ephemeral stream. A geothermal spring is active at Turkey Run and also drains to Harley Gulch. See "Figure 2, Mine Features".

Harley Gulch is a State of California impaired water body, listed under the Clean Water Action Section 303(d) for mercury. Harley Gulch is a tributary of Cache Creek. Cache Creek flows to the Sacramento River and then to the Sacramento-San Joaquin Bay-Delta. See "Figure 2, Cache Creek Watershed".

The Site is accessible to the public and immediately adjacent to Highway 20.

### **3. Removal site evaluation**

Mining waste (inorganic mercury) may become an environmental problem when it contacts water and mercury bound sediments are transported from the site, deposited in waterways where methylation can occur. Mercury can also be transported by air, dissolved in water, bound to sediments and accumulates in tissue of aquatic organisms. Mercury bioaccumulates as it moves up the aquatic food chain, resulting in highest tissue concentrations in high order consumers (predatory fish, humans). (USGS, 2004).

The Cache Creek watershed, divided into upper and lower basins at the town of Rumsey, contributes up to 50% of the total mercury load in the Sacramento River. The upper basin is sparsely populated, most use being attributed to range land. The lower basin is well populated and intensively farmed, and includes the Site location. Water samples collected during base and peak storm flows document mercury concentrations increases of up to two orders of magnitude during large runoff events in the Cache Creek. (Tetra Tech, 2003). In 2000-2001, a number of federal and state agencies, a California university and a commercial laboratory undertook a series of scientific studies in the Cache Creek Area to characterize the nature and extent of mercury contribution from Cache Creek.



The highest total concentrations of mercury in water were reported by the Regional Water Quality Control Board ("RWQCB") below the confluence of the North Fork and main stem and downstream of Bear Creek. This area receives runoff from Davis Creek and Harley Gulch. A reservoir was constructed in the 1980s on Davis Creek to reduce and direct mercury bound sediment, thereby controlling contributions from Davis Creek. (See Table 3.1).

The Harley Gulch west branch, draining Abbott and Turkey Run mines is easily accessible and therefore has been sampled extensively by others to further characterize the contribution of these abandoned mines as sources to Cache Creek.

**Table 3.1 Range of Mercury Concentrations in Harley Gulch and Turkey Run Spring\***

Location	Range of Total Mercury Concentrations (ng/L)	Range of Methyl Mercury Concentrations (ng/L)
Harley Gulch West	2,070 to 359,448	Not Reported
Harley Gulch East	59 to 925	Not Reported
Harley Gulch, Combined	29 to 831	0.667 to 7.76
Turkey Run Spring	10 to 200	0.005 to 0.009

\*Final EE/CA, Tetra Tech EM, 2003

Notes:

ng/L: nanograms per liter

In addition to mercury in water, mercury can be found in sediments at the Site. Most mercury is particulate bound and mobilized by storm events through sheet flow. These suspended sediments containing mercury range from 0.2 to 0.7 parts per million (ppm) during base flow and from 1.8 to 14.5 ppm during storm runoff. Deposited sediment in the stream bed of Harley Gulch has also been extensively sampled by others, as it is accessible. Sediment samples range from 1.88 to 92.3 ppm in fixed locations. (USGS, 2004. See Table 3.2).

**Table 3.2 Summary of Selected Analytical Results of Harley Gulch Sediment Sampling**

<b>Sampling Event</b>	<b>Description/Location</b>	<b>Range of Mercury Concentrations (ppm)</b>
Goff and others, 1994	3 Sediment Samples, Harley Gulch	1.88 to 92.3
Foe and Croyle, 1998	West Branch, Harley Gulch	27.0 to 53.6
Churchill and Clinkenbeard, 2002	2 Mud Samples, West Branch, Harley Gulch	31.1 to 56.1

\*Final EE/CA, Tetra Tech EM, 2003

Notes:

ppm—parts per million

U.S. EPA Emergency Response Section has received requests from the Regional Water Quality Control Board, the Bureau of Land Management and U.S. EPA's water division for assistance to assess and mitigate the releases from these mines impacting Harley Gulch.

On April 25, 2006, U.S. EPA and Superfund Technical Assistance Response Team ("START") conducted a walkthrough of the Site to identify mine features for screening sampling and analysis. See Appendix B, Photographic Log. Four decision units were identified: 1) Turkey Run Waste Rock Pile, 2) Vicinity of Process Buildings (Abbott Mine), 3) Abbott Mine Tailings Pile, and 4) Turkey Run Ore Bin area. A total of 40 analytical samples, plus appropriate quality assurance/quality control samples, were collected from each of these four decision units and submitted for total mercury analysis and statistical correlation analysis using x-ray fluorescence spectroscopy (XRF), with laboratory confirmation provided by U.S. EPA's Region 9 Laboratory. Due to safety concerns, sediment samples were not collected during this site visit. The range of data reported from 5.4 to 12,000 mg/kg concentration of total mercury. The data and correlation study results are provided in Appendix C, Data.

**4. Release or threatened release into the environment of a hazardous substance, or pollutant or contaminant**

Mercury is a hazardous substance as defined by Section 101(14) of CERCLA. Mercury exposure occurs from breathing air contaminated with mercury, ingesting contaminated water and food. Mercury, at high levels of exposure, may cause damage to the brain, kidneys and developing fetus. Effects on brain functioning may result in irritability, tremors, changes in vision or hearing, and memory problems. The nervous system is very sensitive to all forms of mercury. Short-term exposure to high levels of mercury vapors can cause lung damage, nausea, vomiting, diarrhea, increased blood pressure or heart rate, skin rashes and eye irritation. Young children are more sensitive

to mercury than adults (ATSDR 1999.)

The toe of the large calcined tailings pile is being actively undercut by Harley Gulch. (See Appendix B, Photographic Log) and is releasing mercury bearing mining waste rock and sediments into the stream.

Mercury bound sediments can also be released with dust generated at the site. These air borne particulates can be deposited into the waterways as well as pose an inhalation/ingestion risk to human health.

In July 2006, USEPA documented high metallic mercury vapor readings at the site using a portable mercury vapor analyzer (Lumex). When metallic mercury vapors are inhaled, they readily enter the bloodstream and are carried throughout the body and can move into the brain and in turn, affect the nervous system. Mercury is a naturally occurring element, and can be detected in background concentrations. Mercury vapor readings at background in the breathing zone were established during this site walk at 24 ng/m<sup>3</sup>. These values reported in Table 4.1 below are many times higher than background.

**Table 4.1 Abbott/Turkey Run Lumex Readings, July 28, 2006**

Location	Lumex Concentrations (ng/m <sup>3</sup> )
Background at Breathing Zone	24
Operator Shack	119
Assessor's Shack	121
Upper Ore Bin	74
Chimney Stack East of Process Bulding	24,000
At Funnel before Rotary Kiln	1,900
On Rotary Kiln	3,500
Top of Lower Funnel	19,000
Wood on Condensor Trough	13,000
In condensor pipe	1,500
In space between south and middle trough	9,000
East end of condensor troughs	100,000
At Cyclone Fan	220
Bottom of tailings dump funnel	28,000

**5. NPL status**

This Site is not on the National Priorities List (NPL).

**B. Other Actions to Date**

In 1998, the State Water Resources Control Board adopted the 303(d) List that identified Sacramento Delta waterways as impaired for mercury because of the presence of a fish consumption advisory. The list identified the TMDL control program for mercury in the Delta as a high priority. In November 2004, the Regional Water Quality Control Board issued the "Cache Creek, Bear Creek and Harley Gulch TDML for Mercury". The Waterboard estimates that 81-95% of the total mercury measured in Harley Gulch is attributable to the West Branch that receives drainage from the Abbott and Turkey Run mines.

This report was referenced in the Amendments to the Water Quality Control Plan in October 2005. This amendment requires a 95% load reduction from inactive mercury mines discharging into these creeks and identified Abbott and Turkey Run Mines as major contributor of mercury to Harley Gulch and therefore the Cache Creek watershed.

The Regional Water Control Board has prepared a Draft Cleanup and Abatement Order for the current property owners to compel cleanup at this Site. See Enforcement Addendum.

**C. State and Local Authorities Roles**

**1. State and local actions to date**

The Regional Water Quality Control Board, Central Valley Region, has established Total Maximum Daily Loads (TMDLs) for mercury in Harley Gulch, designated an impaired waterway under Section 303(d) of the Clean Water Act.

On August 10, 2006, a formal request for federal action was received by U.S. EPA from the State of California, Regional Water Quality Control Board, Central Valley Region ("RWQCB") for this Site.

**2. Potential for Continued State/Local Response**

The state may issue the Cleanup and Abatement Order at some time in the future.

**III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES**

Current Site conditions pose the threat of potential future releases of hazardous

substances. These substances include mercury present within mine tailings and waste rock, contaminated soils and sediments. The likelihood of direct human exposure, via ingestion and/or inhalation of hazardous substances, and the threat of potential future releases and migration of those substances, pose an imminent and substantial endangerment to public health, and/or welfare, or the environment based on the factors set forth in the NCP, 40 CFR § 300.415(b)(2). These factors include:

**1. Actual or potential exposure to hazardous substances or pollutants or contaminants by nearby populations or the food chain**

As described in Section II.A.4, high concentrations of mercury, a heavy metal, has been detected in samples of tailings piles, soil, stream channel sediments and in vapor at the site. Much of sediment is very fine-grained and therefore likely to result in human exposure via inhalation or ingestion. Hazardous substances may be entrained in naturally and mechanically generated dust.

Analytical results indicate that concentrations of heavy metals identified in these media, exceed background and regulatory levels including U.S. EPA's Preliminary Remediation Goals (PRGs) (See Data, Appendix C). Mercury is a hazardous substance as defined by Section 101(14) of CERCLA. Mercury exposure occurs from breathing air contaminated with mercury, ingesting contaminated water and food. Mercury, at high levels of exposure, may cause damage to the brain, kidneys and developing fetus. Effects on brain functioning may result in irritability, tremors, changes in vision or hearing, and memory problems. The nervous system is very sensitive to all forms of mercury. Short-term exposure to high levels of mercury vapors can cause lung damage, nausea, vomiting, diarrhea, increased blood pressure or heart rate, skin rashes and eye irritation. Young children are more sensitive to mercury than adults (ATSDR 1999.)

Mine tailings at the Site are readily accessible to persons that utilize the area for recreational purposes. The Site is situated in between a well traveled state highway (Highway 20 and the Indian Valley/Walker Ridge Recreation Area. There is one squatter living on the site and he reports other persons engage in recreational activity at the site. Recreational activities in the vicinity of the Site include hunting, hiking, biking, use of all-terrain vehicles, and camping. The Site may be considered an attractive nuisance because of its unique appearance. Physical characteristics of the Site, such as the possibility of slope failure, also pose significant hazards to casual users of the Site.

High concentrations of metals in sediments have likely manifested in toxic impacts on aquatic life in the Harley Gulch and within Cache Creek, further downstream. Wildlife may also be exposed to hazardous substances in fine-grained tailings and waste rock via the ingestion and inhalation pathways.

**2. Weather conditions that may cause hazardous substances or pollutants or**

### **contaminants to migrate or be released**

Visual observation suggests that tailings from the large calcined tailings pile at Abbott are incrementally washed into the tributary during base-flow and high-flow periods. Tailings, waste rock, and contaminated soils within the stream and along the bank regularly come into contact with, and are eroded or deposited into surface waters during flow periods.

Drainage controls installed at Glory Hole Gulch has effectively routed water through the tailings pile at Abbott as well as contributes to waterflow at Turkey Run. Check dams previously installed have eroded and/or failed, resulting in the channeling of run on from waste rock above the tailings pile, through the pile. Finely grained sediment is carried via overland sheet flow and deposited to the Harley Gulch during annual rain events.

### **3. Availability of other appropriate Federal or State response mechanisms to respond to the release**

The State Regional Water Quality Control Board has stated it is unable to perform removal actions necessary at this Site and has requested federal assistance as described in a Federal Request for Action Letter, dated August 10, 2006.

## **IV. ENDANGERMENT DETERMINATION**

Actual and threatened releases of hazardous substances from this site, if not addressed by implementing a Time-Critical Removal Action may continue to present an imminent and substantial endangerment to public health, or welfare, or the environment.

## **V. PROPOSED ACTIONS AND ESTIMATED COSTS**

### **A. Proposed Actions**

#### **1. Proposed action description**

U.S. EPA proposes to mitigate imminent and substantial threats to human health, welfare, or the environment by taking steps to prevent the release of hazardous substances in contaminated soil, sediments, mine tailings, waste rock and/or ore, to the surface waters within Harley Gulch and to the surrounding environment where there is a high likelihood of direct human contact. The removal action will include the following objectives:

- Remove and/or stabilize tailings and sediment from the west branch of Harley Gulch and portions of Glory Hole Gulch to prevent further downstream and/or

- offsite migration of mercury bound sediment or fines;
- Grading and bank stabilization measures may be implemented as necessary to abate the release of tailings into the waterway;
- Remove and dispose of mercury-impacted process equipment and/or structures posing actual or threat of release at the Site including condensers, wooden troughs and bricks;
- Ensure process equipment and structures (such as the rotary kiln) remaining are permanently sealed precluding further releases of hazardous substances;
- Install new and/or repair existing erosion and drainage controls including but not limited to dams, velocity breaks and sedimentation basins, at Glory Hole Gulch to route overland sheetflow outside of the tailings footprint;
- Excavate/grade/cap existing impacted soils and tailings piles as necessary to prevent future slope failure into the Harley Gulch; and,
- Mitigate the threat of future releases of hazardous substances within the tailings and waste rock using a possible combination of three options: disposal off site; restaging and capping on site; and capping in place. Site grading and bank stabilization techniques may be used to abate the release of tailings deposits within or in close proximity to the stream channel.

## **2. Contribution to remedial performance**

Long term remedial actions may include treatment or disposal of contaminated soils, sediments, debris, and surface waters in and around the Site.

### The long-term cleanup plan for the site:

It is expected that this removal action will eliminate any threat of direct or indirect contact or inhalation of hazardous substances at the Site. There is no known groundwater contamination at the Site.

### Threats that will require attention prior to the start of a long-term cleanup:

The immediate threats that have been identified in this memorandum will be addressed by the proposed removal action.

### The extent to which the removal will ensure that threats are adequately abated:

The removal and/or stabilization of abandoned, above ground hazardous substances will abate the threats posed by the Site.

### Consistency with the long-term remedy:

U.S. EPA asserts that the Time-Critical Removal proposed for the Site is consistent with addressing mine waste issues within the Cache Creek Watershed.

### **3. Description of alternative technologies**

Alternative technologies have not been considered.

### **4. Applicable or relevant and appropriate requirements (ARARs)**

Section 300.415(j) of the NCP provides that removal actions must attain ARARs to the extent practicable, considering the exigencies of the situation.

Section 300.5 of the NCP defines applicable requirements as cleanup standards, standards of control, and other substantive environmental protection requirements, criteria or limitations promulgated under Federal environmental or State environmental or facility siting laws that specifically address a hazardous substance, pollutant, contaminant, remedial action, location or other circumstances at a CERCLA site.

Section 300.5 of the NCP defines relevant and appropriate requirements as cleanup standards, standards of control and other substantive requirements, criteria, or limitations promulgated under Federal environmental or State environmental or facility siting laws that, while not "applicable" to a hazardous substance, pollutant, or contaminant, remedial action, location, or other circumstances at a CERCLA site, address problems or situations sufficiently similar to those encountered at the CERCLA site and are well-suited to the particular site.

Because CERCLA on-site response actions do not require permitting, only substantive requirements are considered as possible ARARs. Administrative requirements such as approval of, or consultation with administrative bodies, issuance of permits, documentation, reporting, record keeping, and enforcement are not ARARs for the CERCLA sections confined to the site.

The following ARARs have been identified for the proposed response action. All can be attained.

Federal ARARs: The Clean Water Act, 33 U.S.C. Sections 1251, et. seq. and 40 CFR Parts 122, 123 and 124. CERCLA Off-Site Disposal Rule, 42 U.S.C. Section 9621(d)(3) and OSWER Directive 9347.3-8FS; RCRA Land Disposal Restrictions (LDRs) 40 CFR 268.40 ; and the U.S. Department of Transportation of Hazardous Materials Regulations 49 CFR Part 171, 172 and 173.

State ARARs: In an August 10, 2006 letter to EPA, the Central Valley Regional Water Quality Control Board identified the TMDL requirement for the Cache Cree/Harley Basin watersheds, water quality objectives found in the Central Valley Region's Basin Plan and cleanup requirements found in State Water Resources Control Board Resolution 92-49. EPA has reviewed these proposed ARARs and determined that the TMDL requirements have not yet been promulgated by the State of California,



and therefore do not meet the definition of an ARAR as defined in the National Contingency Plan, 40 CFR sec. 300.5. EPA does generally recognize as ARARs the water quality objectives of the Central Valley Region Basin Plan, where applicable, and Section III.G of the SWRCB Resolution 92.49. As required by the National Contingency Plan, EPA in conducting a removal action, will to the extent practicable, given the exigencies of the situation attain any applicable or relevant and appropriate Basin Plan water quality objectives. 40 CFR sec. 300.415(j).

## **5. Project schedule**

It is estimated that removal activities will take approximately 70 working days to complete.

## **B. Estimated Costs**

### **Regional Removal Allowance Costs**

Cleanup Contractor	\$ 1,000,000
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### **Extramural Costs Not Funded from the Regional Allowance**

Design/Engineering Contractor	95,000
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START Contractor	35,000
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REAC Contractor	<u>110,000</u>
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Extramural Subtotal	\$ 1,240,000
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Extramural Contingency (15%)	<u>\$ 186,000</u>
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TOTAL, Removal Action Project Ceiling	\$ 1,426,000
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## **VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN**

Given the site conditions, the nature of the hazardous substances documented on site, and the potential exposure pathways to nearby populations described in Sections III and IV above, actual or threatened releases of hazardous substances from the Site, if not addressed by implementing the response actions selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.

## VII. OUTSTANDING POLICY ISSUES

There are no outstanding policy issues with the Site identified at this time.

## VIII. ENFORCEMENT

Please see the attached Confidential Enforcement Addendum for a discussion regarding potentially responsible parties. In addition to the extramural costs estimated for the proposed action, a cost recovery enforcement action also may recover the following intramural costs:

Intramural Costs <sup>1</sup>	
U.S. EPA Direct Costs	\$ 50,000
U.S. EPA Indirect Costs (35.28%)	<u>\$ 520,733</u>
TOTAL Intramural Costs	\$ 570,733

The total U.S. EPA extramural and intramural costs for this removal action, based on full-cost accounting practices, that will be eligible for cost recovery are estimated to be 1,946,733.

---


1. Direct costs include direct extramural costs and direct intramural costs. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site-specific direct costs, consistent with the full cost accounting methodology effective October 2, 2000. These estimates do not include pre-judgement interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual costs from this estimate will affect the United States' right to cost recovery.

## IX. U.S. EPA RECOMMENDATION

This decision document represents the selected removal action for the Abbott-Turkey Run Mines Site, Wilbur Springs, Lake County, California developed in accordance with CERCLA as amended, and not inconsistent with the NCP. This decision is based on the Administrative Record for the Site.

Because conditions at the site meet the NCP criteria for a Time-Critical Removal Action, U.S. EPA enforcement staff recommend the approval of the removal action proposed in this Action Memorandum. The total project ceiling if approved will be \$1,946,733, of which an estimated \$1,426,000 comes from the Regional Removal Allowance. Approval may be indicated by signing below.

Approve:

  
Daniel Meer, Chief  
Response, Planning and Assessment Branch

Date

10/6/06

Disapprove:

\_\_\_\_\_  
Daniel Meer, Chief  
Response, Planning and Assessment Branch

Date

Enforcement Addendum  
Appendix A, Figures  
Appendix B, Photographic Log  
Appendix C, Data

Attachments:

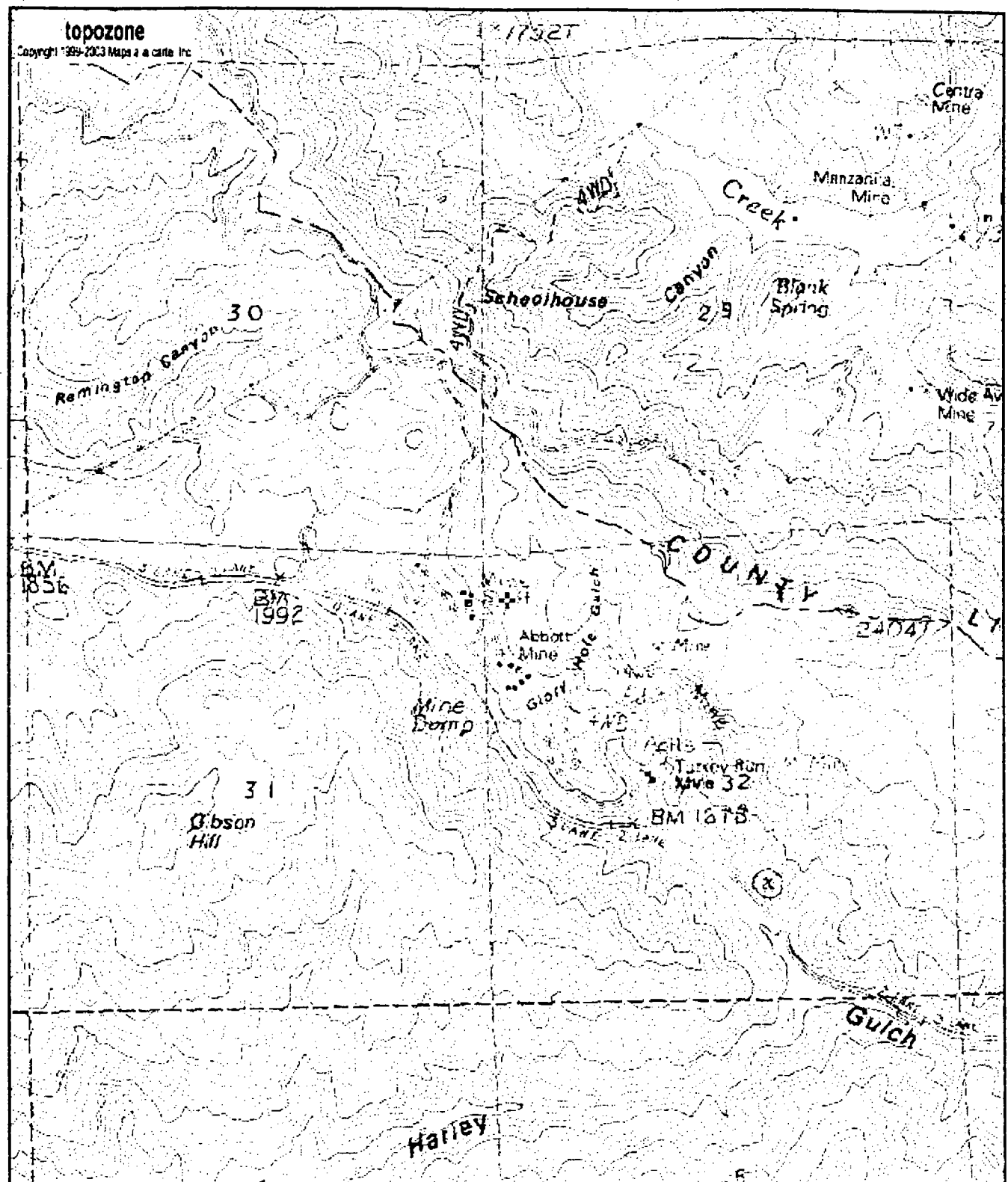
1. Index to the Administrative Record

cc: Sherry Fielding, OEM, HQ  
Pat Port, U.S. Department of Interior  
T. Vortner, Central Valley Regional Water Quality Control Board

bcc: J. Yocum, SFD-9-2  
L. Bradfish, ORC-3  
C. Reiner, SFD-9-4  
C. Temple, SFD-9-4  
Site File

**ABBOTT-TURKEY RUN MINES SITE  
AUGUST 2006**

**APPENDIX A  
FIGURES**

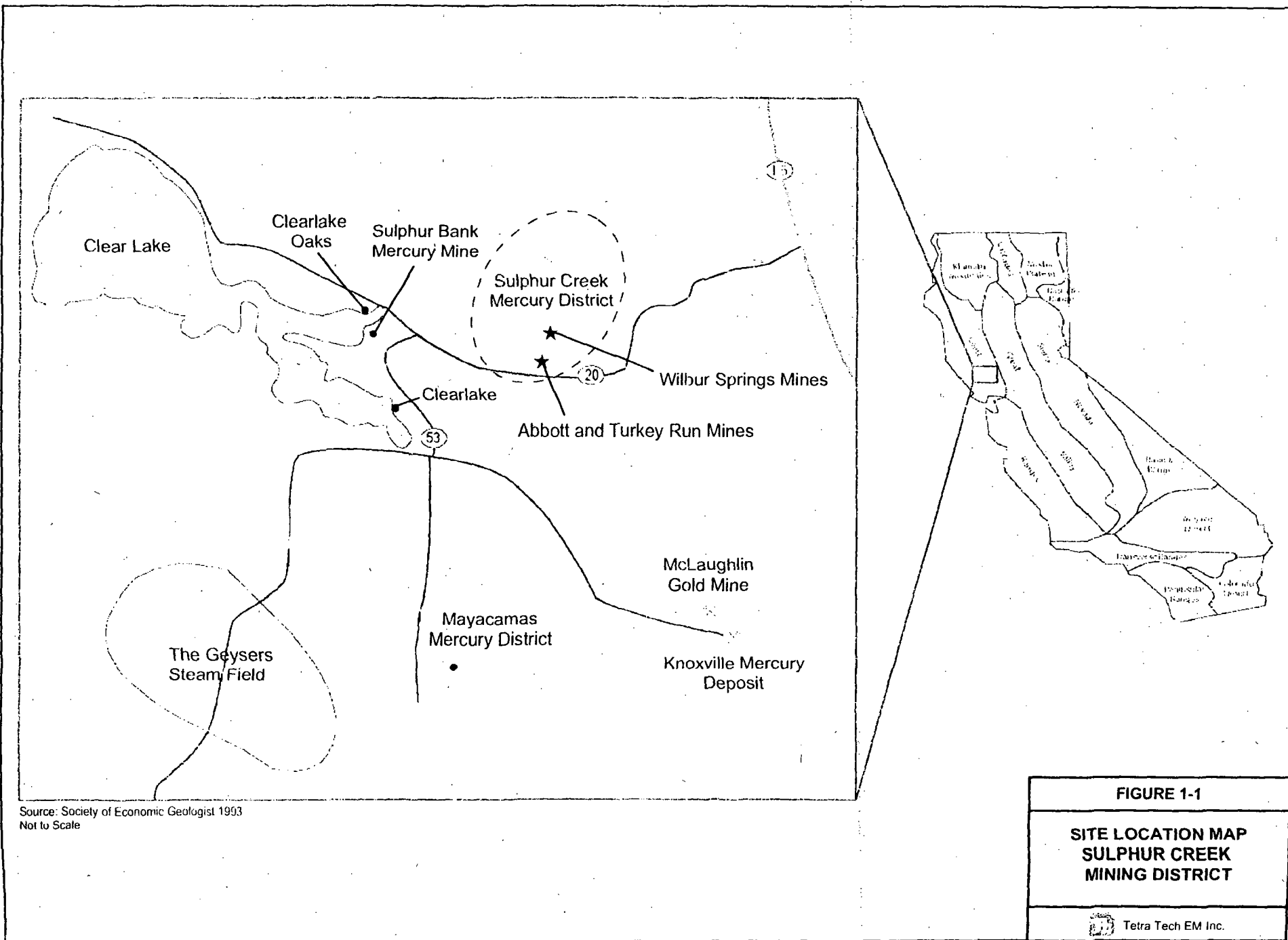


UTM 10 548021E 4319408N (NAD83/WGS84)  
**Abbott Mine, USGS WILBUR SPRINGS (CA) Quadrangle**  
 Projection is UTM Zone 10 NAD83 Datum

M=15.496  
 G=0.349

**ABBOTT-TURKEY RUN MINES SITE  
AUGUST 2006**

**Figure 1  
Site Location Map**

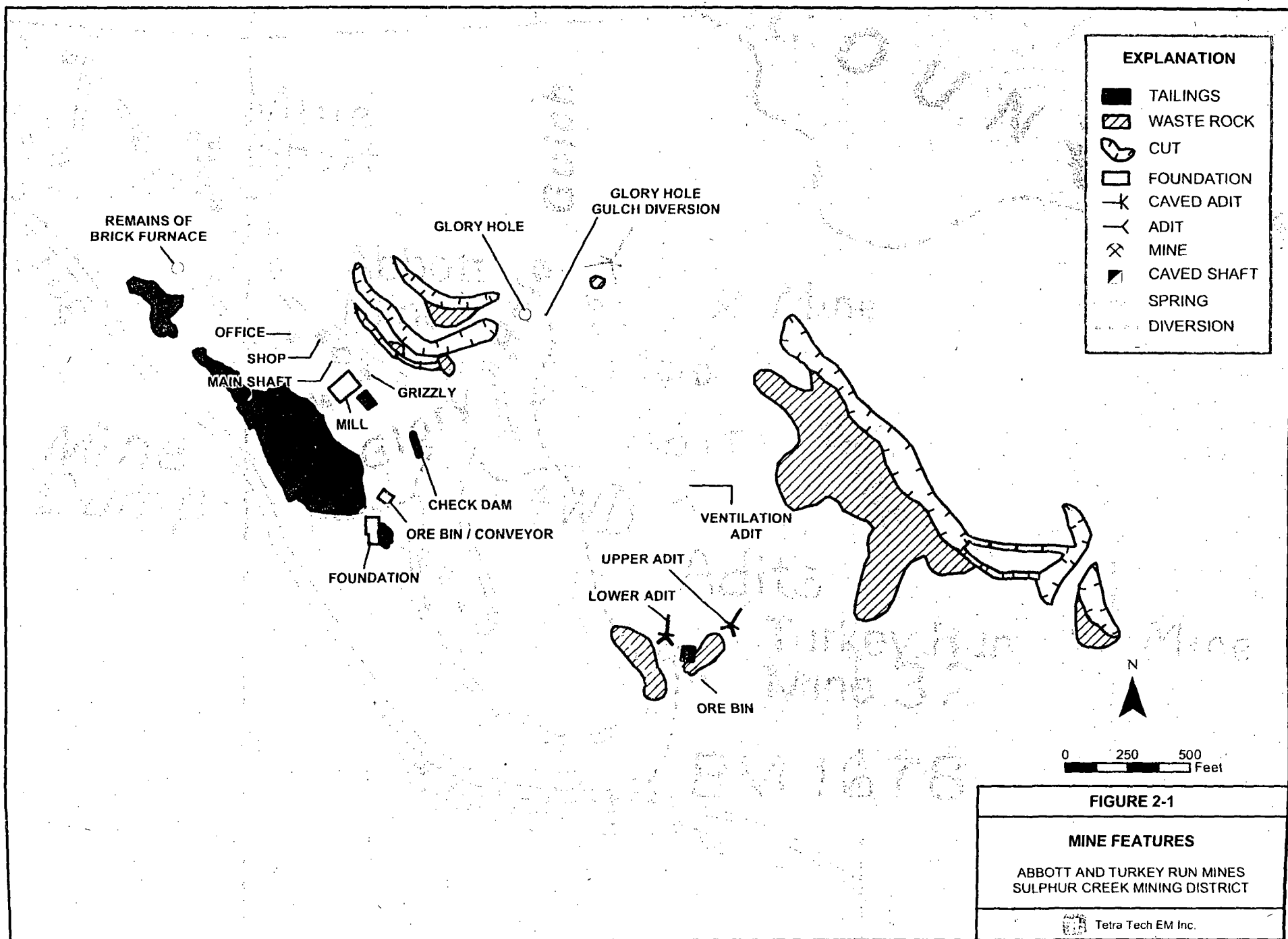


Source: Society of Economic Geologist 1993  
Not to Scale



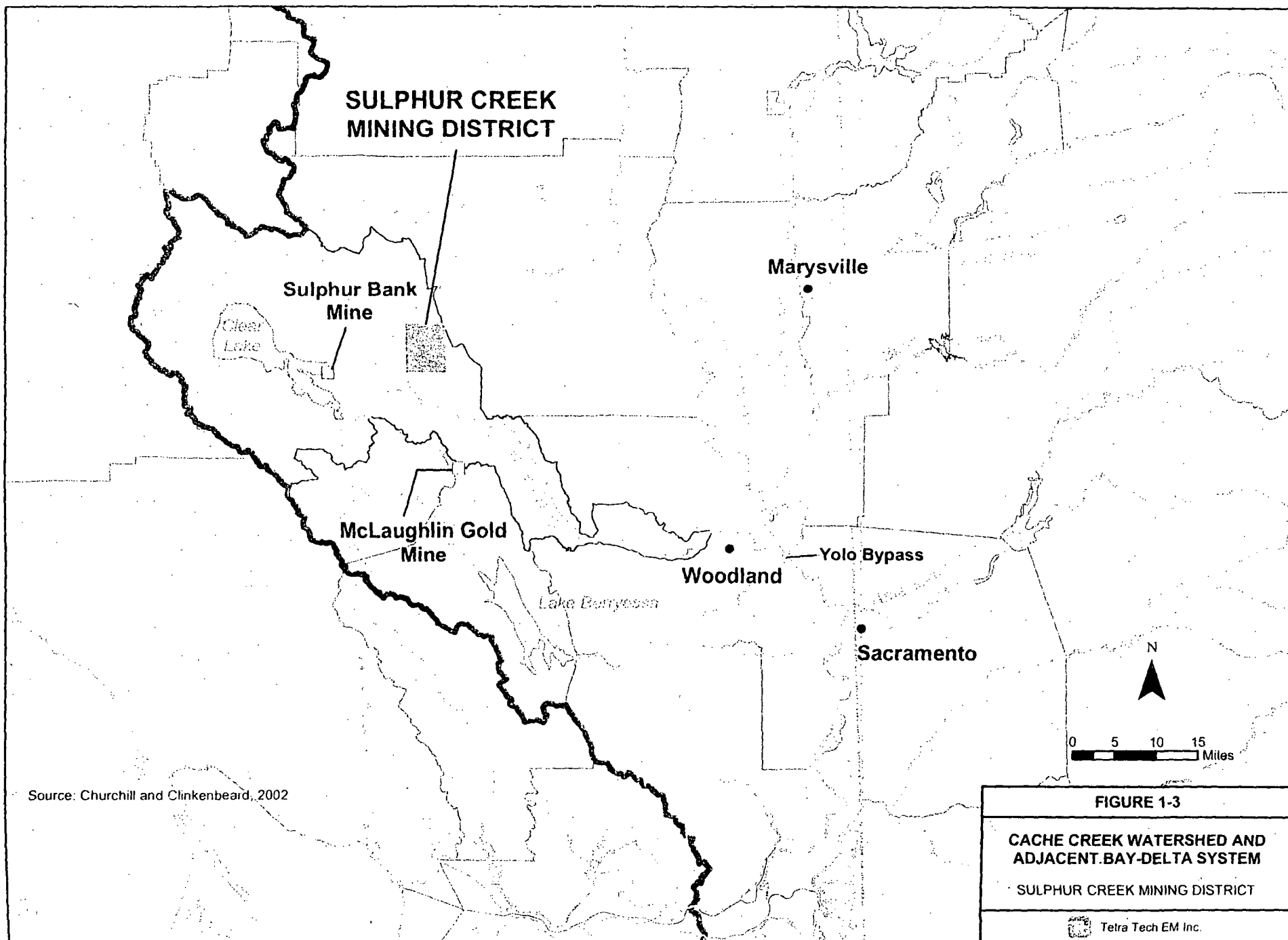
**ABBOTT-TURKEY RUN MINES SITE  
AUGUST 2006**

**Figure 2  
Mine Features**



**ABBOTT-TURKEY RUN MINES SITE  
AUGUST 2006**

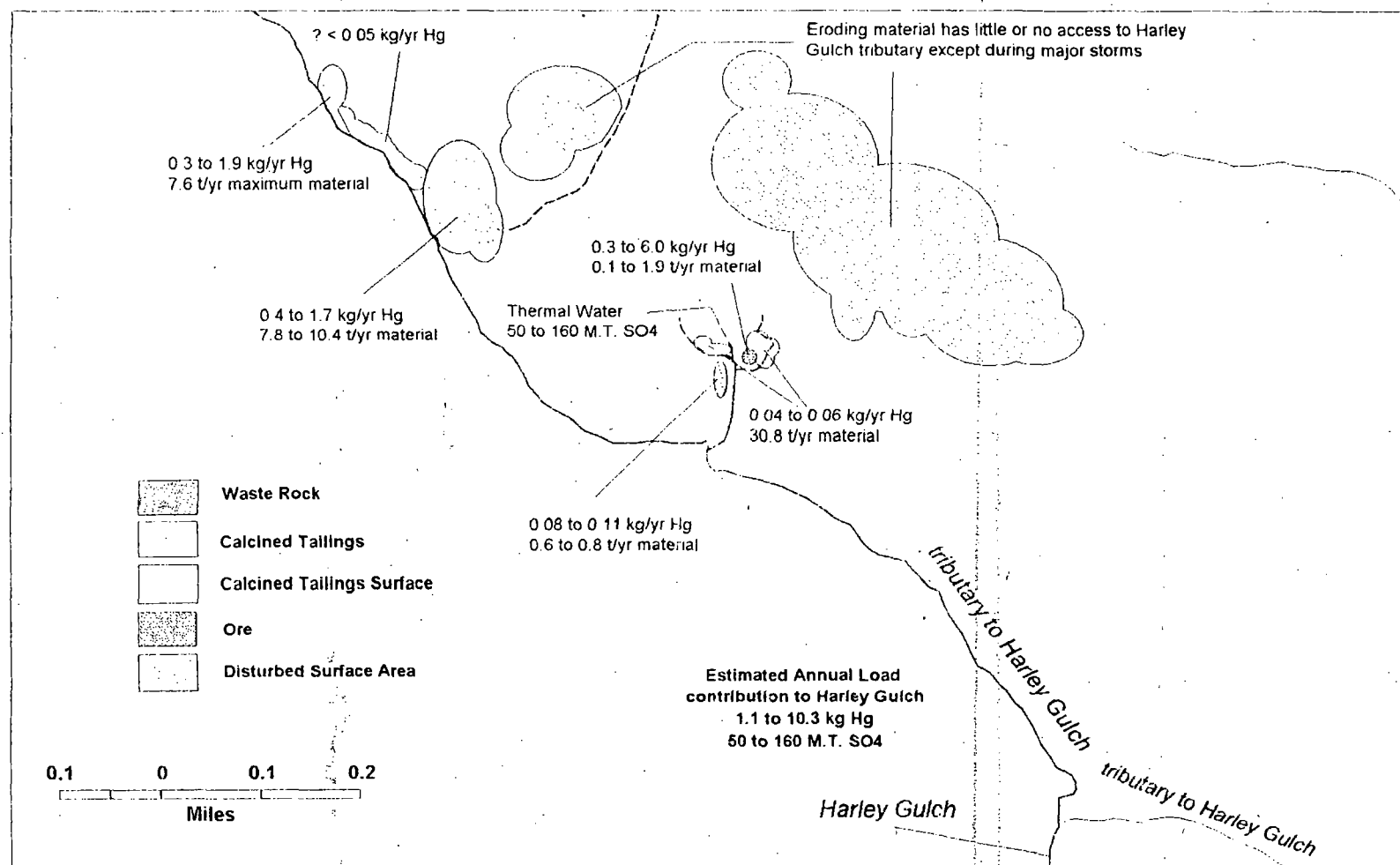
**Figure 3  
Cache Creek Watershed**



Source: Churchill and Clinkenbeard, 2002

**ABBOTT-TURKEY RUN MINES SITE  
AUGUST 2006**

**Figure 4  
Harley Gulch Contributions**



**FIGURE 3-4**

**ESTIMATED ANNUAL MERCURY  
CONTRIBUTIONS TO THE WATERSHED  
BY FEATURE**

ABBOTT AND TURKEY RUN MINES  
SULPHUR CREEK MINING DISTRICT

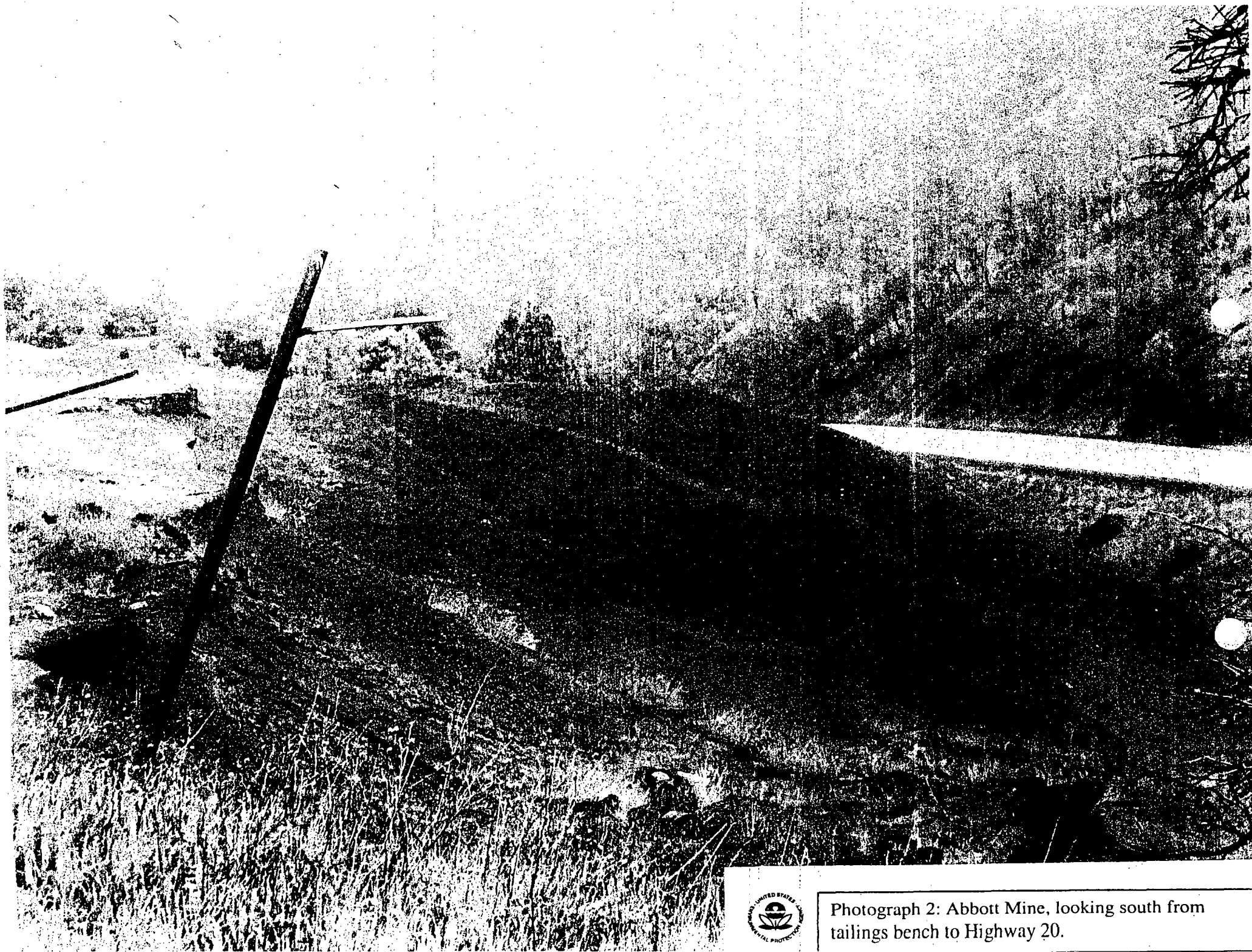
**ABBOTT-TURKEY RUN MINES SITE  
AUGUST 2006**

**APPENDIX B  
PHOTOGRAPHIC LOG**



Photograph 1: Abbott Mine, looking west showing process buildings and mill area.

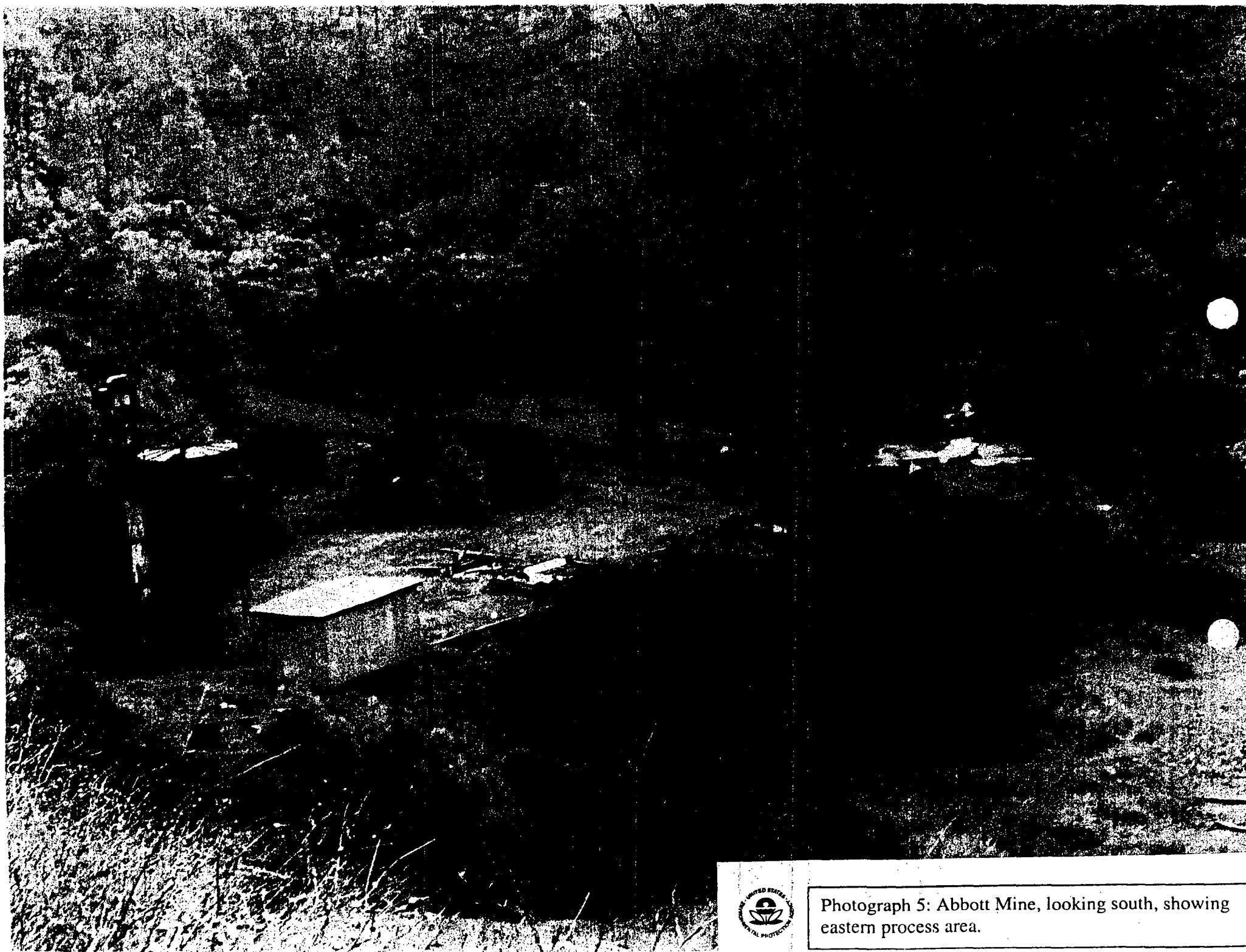




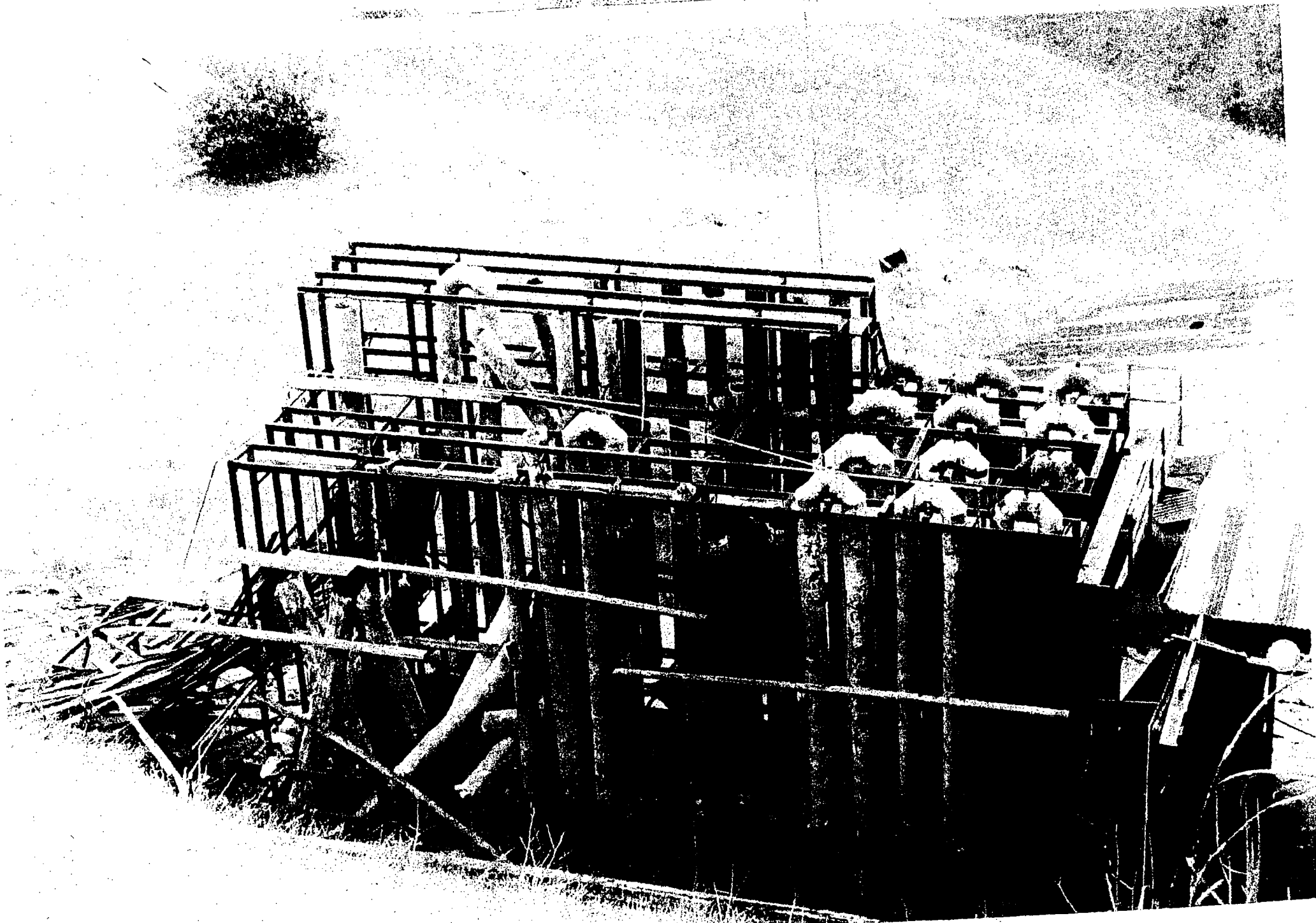
Photograph 2: Abbott Mine, looking south from tailings bench to Highway 20.



Photograph 3: Abbott Mine, looking west from tailings pile. Showing Harley Gulch at the left side

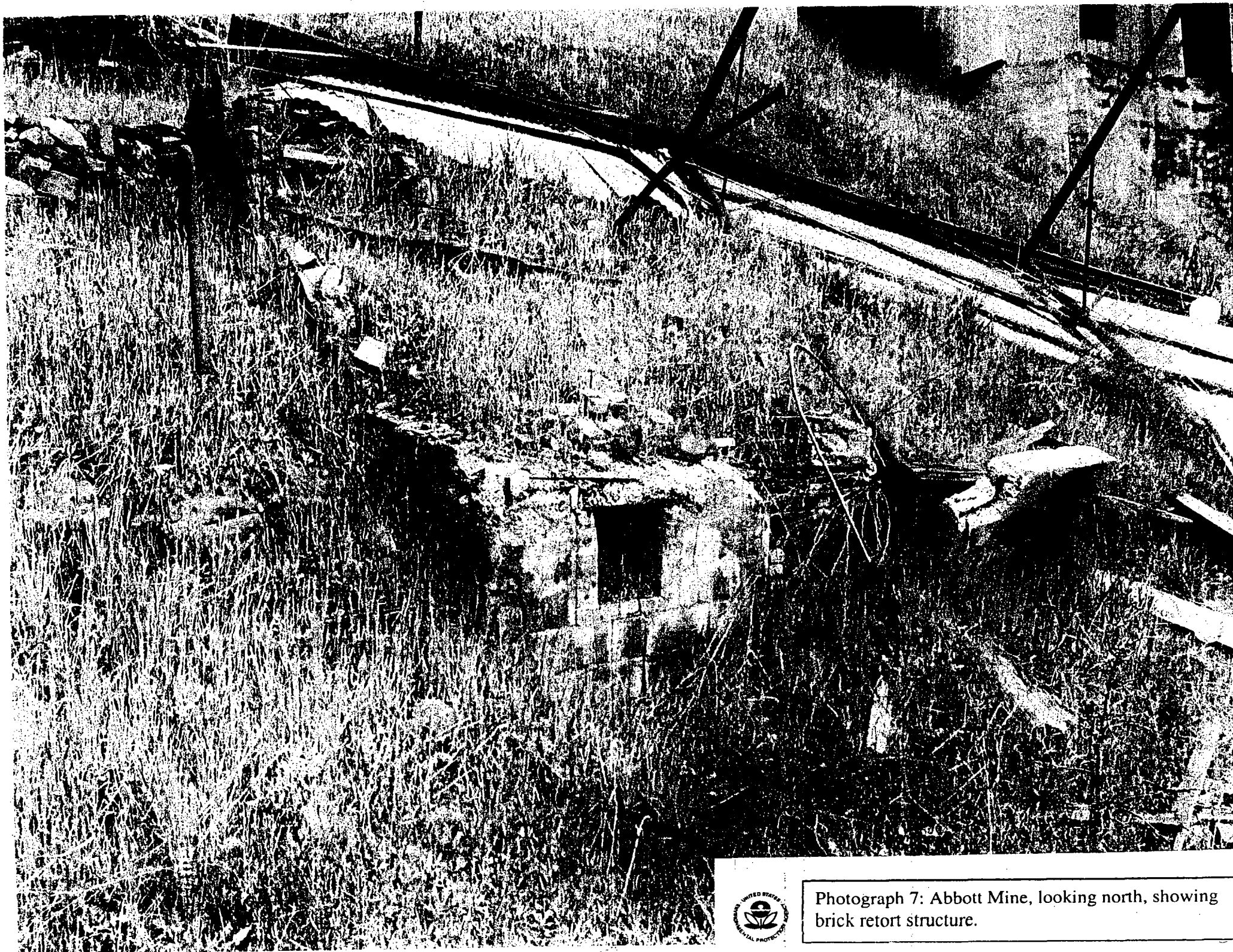


Photograph 5: Abbott Mine, looking south, showing eastern process area.

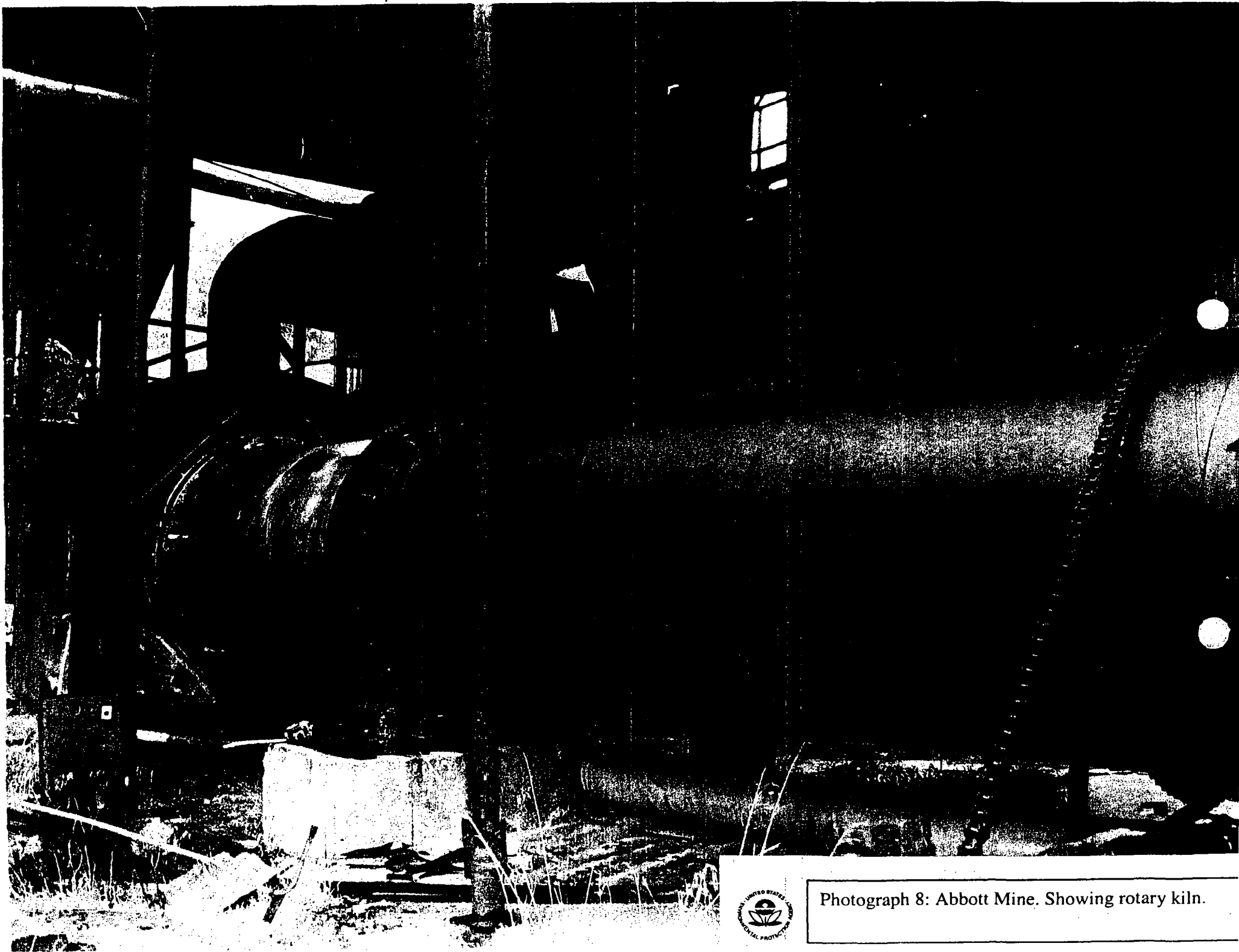


Photograph 6: Abbott Mine, looking south, showing condenser rocks





Photograph 7: Abbott Mine, looking north, showing brick retort structure.



Photograph 8: Abbott Mine. Showing rotary kiln.





Photograph 10: Turkey Run. Showing ore bin.



**ABBOTT-TURKEY RUN MINES SITE  
AUGUST 2006**

**APPENDIX C  
DATA**

Table 1  
Abbott/Turkey Run Mines  
XRF and Laboratory Sample Data  
25-Apr-06

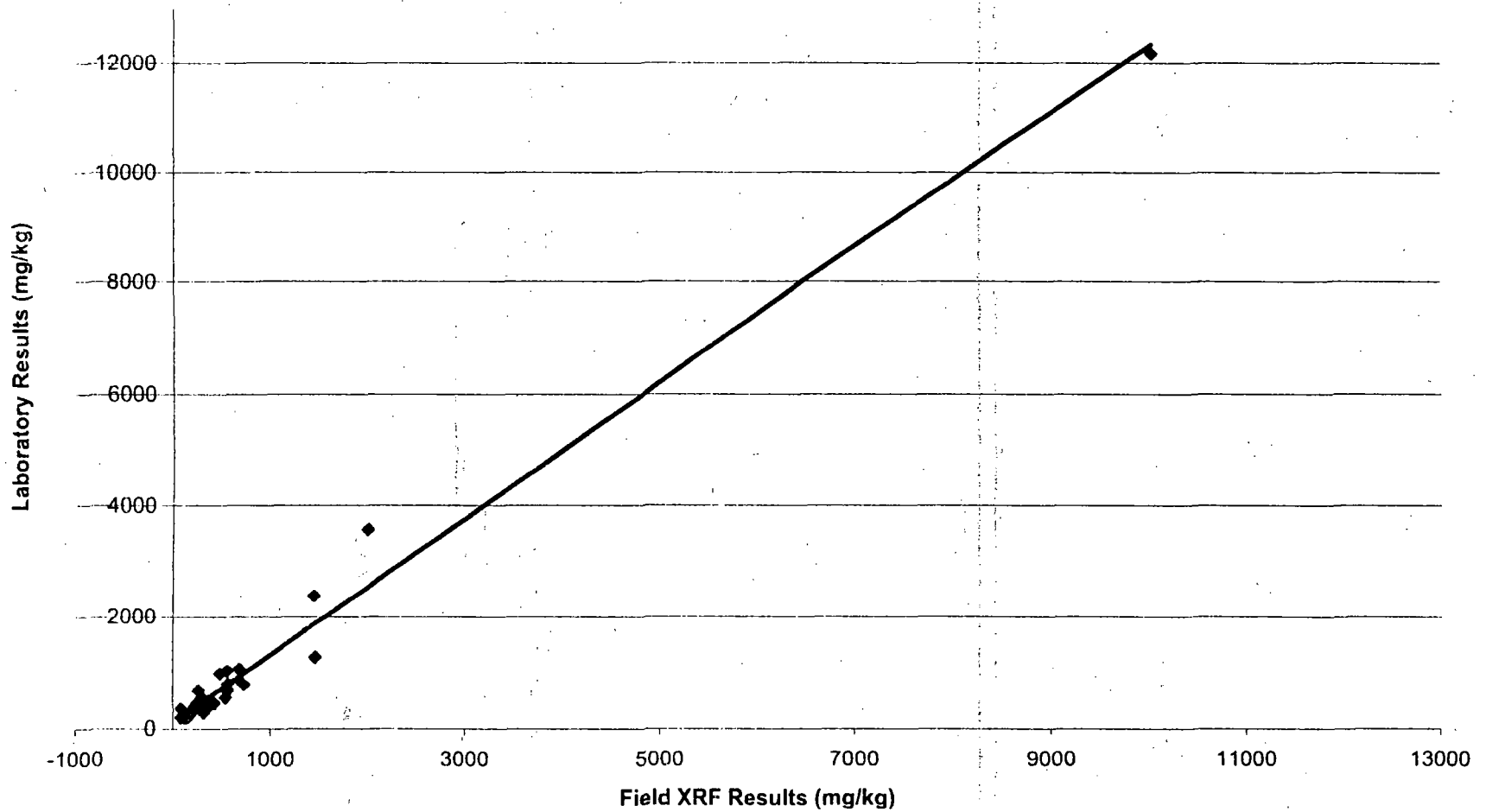
Sample Number	XRF Mercury Concentration (mg/kg)	Laboratory Mercury Concentration (mg/kg)	Validated Qualification
<b>Background</b>			
BAC-01	<LOD	0.42	J
BAC-02	<LOD	1.5	J
<b>Decision Unit 1- Turkey Run Waste Rock Pile</b>			
DU1-01	237.94	360	J
DU1-02	359.19	270	J
DU1-03	<LOD	12	J
DU1-04	247.95	94	J
DU1-05	168.56	180	J
DU1-06	<LOD	11	J
DU1-07	477.98	370	J
DU1-08	263.89	270	J
DU1-09	19.94	170	J
DU1-10	235.72	300	J
DU1-2005	142.59	190	J
<b>Decision Unit 2 - Vicinity of Process Buildings</b>			
DU2-01	328.12	260	J
DU2-02	287.1	200	J
DU2-03	1390.98	1100	J
DU2-04	624.15	680	J
DU2-05	1929.54	3400	J
DU2-06	497.64	620	J
DU2-07	1375.19	2200	J
DU2-08	421.58	810	J
DU2-09	157.53	200	J
DU2-10	492.56	860	J
DU2-2002	266.96	270	J
<b>Decision Unit 3 - Abbott Mine Tailings Pile</b>			
DU3-01	74.51	60	J
DU3-02	60.11	69	J
DU3-03	97.33	36	J
DU3-04	163.47	170	J
DU3-05	52.77	7.0	J
DU3-06	501.87	500	J
DU3-07	86.34	24	J
DU3-08	249.31	220	J
DU3-09	201.92	180	J
DU3-10	55.42	57	J
DU3-2005	45.79	5.4	J
<b>Decision Unit 4 - Turkey Run Ore Bin Area</b>			
DU4-01	616.53	890	J
DU4-02	107.02	63	J
DU4-03	9957.11	12000	J
DU4-04	57.36	9.6	J
DU4-05	122.69	120	J
DU4-06	48.59	37.9	J
DU4-07	664.31	610	J
DU4-08	42.58	23	J
DU4-09	195.67	500	J
DU4-10	185.22	280	J
DU4-2002	110.3	72	J

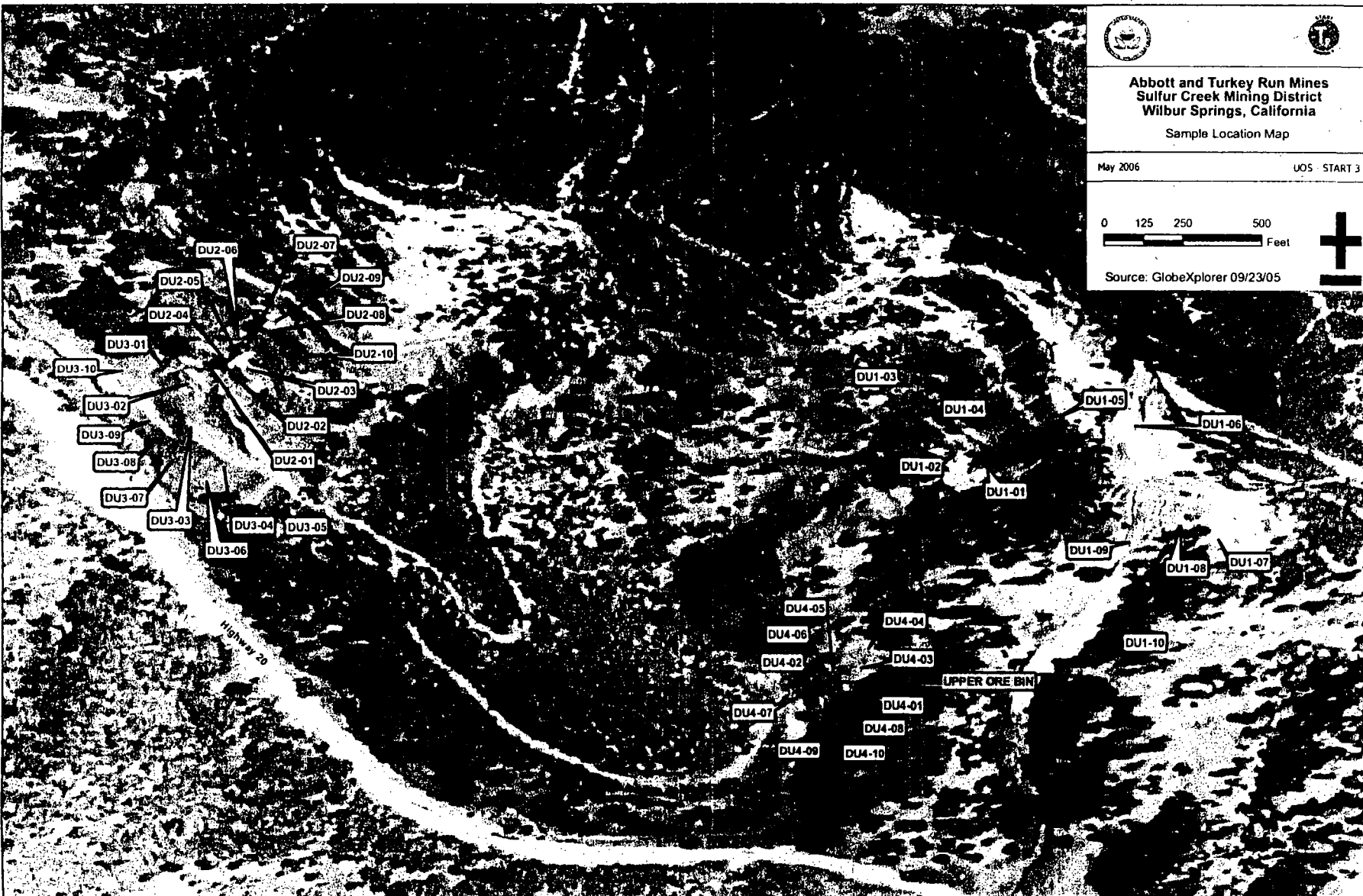
<LOD- less than level of detection

J - detected results qualified as estimated by validator

**Figure 1**  
**Abbott/Turkey Run Mines**  
**XRF/Laboratory Data Correlation**

$$y = 1.222x + 0.3836$$
$$R^2 = 0.9845$$





**Abbott-Turkey Run Mines Site  
August 2006**

**Index to the Administrative Record**

1. Agency for Toxic Substances and Disease Registry (ATSDR). 1999. Toxicological profile for mercury. Atlanta, GA.
2. United States Geological Survey (USGS). 2004. Summary and Synthesis of Mercury in the Cache Creek Watershed. Sacramento, CA.
3. Tetra Tech. 2003. Final Engineering Evaluation and Cost Analysis.
4. Central Valley Regional Water Quality Control Board (RWCQB). 2004. Amendments to The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins For The Control of Mercury in Cache Creek, Bear Creek, Sulphur Creek, and Harley Gulch. Rancho Cordova, CA.
5. Ronald Churchill and John Clinkenbeard. (2003). Assessment of the Feasibility of Remediation of Mercury Mine Sources in the Cache Creek Watershed.
6. Central Valley Regional Water Quality Control Board (RWCQB). 2004. Cache Creek, Bear Creek and Harley Gulch, TDML for Mercury.
7. Central Valley Regional Water Quality Control Board (RWQCB). 2006. Request for Federal Action.



Linda S. Adams  
Secretary for  
Environmental  
Protection

# California Regional Water Quality Control Board Central Valley Region

Robert Schneider, Chair

Sacramento Main Office  
11020 Sun Center Drive #200 Rancho Cordova, California 95670-6114  
Phone (916) 464-3291 • FAX (916) 464-4645  
<http://www.waterboards.ca.gov/centralvalley>



Arnold  
Schwarzenegger  
Governor

10 August 2006

Ms. Janet Yocum  
U. S. Environmental Protection Agency  
Mail Code: SFD-9-2  
75 Hawthorne Street  
San Francisco, CA 94105

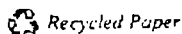
## **REQUEST FOR FEDERAL ACTION, ABBOTT AND TURKEY RUN MINES, LAKE COUNTY**

The California Regional Water Quality Control Board, Central Valley Region (Regional Water Board) is requesting that the U. S. Environmental Protection Agency (U. S. EPA) take Federal Action at the Abbott and Turkey Run mine sites in Lake County, to investigate and cleanup and abate the effects of mercury contamination documented at these mine sites. This action is requested at this time to reduce discharges of mercury-laden sediments to Harley Gulch before the impending rainy season. The Regional Water Board greatly appreciate the assistance offered by the U. S. EPA to identify additional responsible parties and implement emergency removal actions to start addressing necessary cleanup at the Abbott and Turkey Run mine sites.

The Regional Water Board recently approved amendments to the Water Quality Control Plan for the Sacramento and San Joaquin River Basins, Fourth Edition, (Basin Plan) to control mercury discharging to Cache Creek, Bear Creek, Sulphur Creek and Harley Gulch. The Basin Plan was amended to include a Total Maximum Daily Load (TMDL) requirement to reduce mercury loading to Cache Creek and its tributaries. This amendment requires a 95% load reduction from inactive mercury mines discharging into these creeks. Regional Water Board staff has identified Abbott and Turkey Run mines as a major contributor of mercury-laden sediments to Harley Gulch. Mercury contamination has been found in the water, sediment and biota downstream of the Abbott and Turkey Run mine sites. Methylmercury, the organic form of mercury that has entered the biological food chain, is of particular concern, as it accumulates in fish tissue and in wildlife and people that eat the fish. Mine waste present at Abbott and Turkey Run Mines may also pose a threat to human health due to exposure (dermal, ingestion, and inhalation) through recreation (hiking, camping, fishing, and hunting) or work at the mine sites.

Based on provisions of California Water Code section 13304, which authorizes the Regional Water Board to issue Cleanup and Abatement Orders, Regional Water Board staff prepared a Draft Cleanup and Abatement Order for the current property owners to require cleanup of mercury discharges from mine waste, resulting from past mining activities. A search for additional responsible parties to assist in the cost of the necessary cleanup is an ongoing

California Environmental Protection Agency



effort. However, a Federal Action is requested at this time to reduce the continuing discharge from these mine sites and abate the imminent and substantial threat to public health, water quality and the environment as a result of the mercury laden waste at the Abbott and Turkey Run mine sites.

The Regional Water Board is committed to work together with the U. S. EPA on this project. I understand from recent discussions during a site visit on 21 July 2006 that all removal actions taken by the U. S. EPA will be designed to be consistent with any long-term remedies necessary for cleanup at the Abbott and Turkey Run mines. I also understand that the Regional Water Board will have an opportunity to identify and assist in providing guidance so that any removal action will also be in compliance with state requirements.

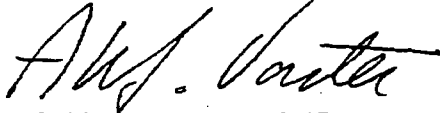
Per your request for information on applicable state requirements, the following is a discussion of the regulations and policies, which govern cleanups under Regional Water Board authority. In the case of these mining sites the Regional Water Board is most concerned with the ongoing runoff from the property of mercury - laden sediments and with any other mercury exposures to human health from the site. The following is a general description of the applicable state requirements. Regional Water Board staff would like to meet with you to further discuss how these requirements would apply more specifically to these mining sites.

The State has adopted implementing regulations in the Water Quality Control Plan (or Basin Plan) for achieving water quality objectives and for implementing State Water Resources Control Board Resolution 92-49, *Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304* is a requirement that sets forth the policies and procedures to be used during an investigation or cleanup of a polluted site and requires that waste be cleaned up to background, or if that is not reasonable, to an alternative level that is that is economically and technologically feasible in accordance with Title 23, California Code of Regulations (CCR) section 2550.4. Any alternative cleanup level to background must: (1) be consistent with the maximum benefit to the people of the state; (2) not unreasonably affect present and anticipated beneficial use of water; and (3) not result in water quality less than that prescribed in the Basin Plan and applicable Water Quality Control Plans and Policies of the State Water Board. In other words, the cleanup must at a minimum result in compliance with water quality standards and protect beneficial uses. As stated above, the implementation plan for cleanup at the Abbott and Turkey Run mine sites in the Basin Plan includes reducing the total mercury load to Harley Gulch by 95%.

The Regional Water Board requests that you provide copies of plans and proposals developed for this project, including the proposed sampling plan to further characterize the site conditions. Regional Water Board staff will review and provide comments on these documents in an expedited manner to support the short time frame for this project. Please continue to copy Kathy Amaru as the Regional Water Board contact on all correspondence generated as part of the responsible party search. Attached is a formal request for Federal Action signed by the Executive Officer Pamela Crendon. This request does not limit the authority of the California Regional Water Quality Control Board, Central Valley Region to take action pursuant to state law.

10 August 2006

I look forward to a cooperative and mutually beneficial relationship working toward cleanup at these abandoned mine sites.



ANTONIA K.J. VORSTER  
Site and Groundwater Cleanup Program Manager

cc. Mr. Bruce MacLean  
Ms. Mary MacLean  
Mr. Ronald Cliff  
Mr. George Cliff  
Ms. Joyce McDowell  
Ms. Jill Eliel  
Ms. Constance Venturi  
Mr. David Lawler, USBLM, Sacramento  
Mr. John Key, USBLM, Sacramento  
Mr. Richard Grabowski, USBLM, Sacramento  
Mr. Robert Schneider, Chair, Central Valley Regional Water Quality Control Board  
Mr. Patrick Morris, Central Valley Regional Water Quality Control Board  
Mr. David Boyer, OCC, State Water Resource Control Board, Sacramento  
Ms. Carol Oz, Dept. of Fish and Game, Rancho Cordova  
Mr. David Melendrez, Caltrans District 1, Eureka,  
Mr. Mike Flake, Caltrans Headquarters, Division of Environmental Services, Sacramento  
Mr. Raymond Ruminski, Environmental Health Director, Lake County Health Services  
Department, Lakeport



## REQUEST FOR FEDERAL ACTION

The California Regional Water Quality Control Board, Central Valley Region ("Requesting Agency") requests assistance from the United States Environmental Protection Agency, Region 9 ("EPA") to conduct a removal action at the facility located at:

Abbott and Turkey Run mine sites, Highway 20 about 24 miles west of Williams

Assessors Parcel Number 006-020-100-00

Street Address, Parcel Number or Other Property Description

Lake County

County

California

State

By making this Request, the Requesting Agency recognizes that with respect to this removal action EPA, or any other federal agency acting in conjunction with or on behalf of EPA, may use its authority under the Comprehensive Environmental Response Compensation and Liability Act ("CERCLA"), 42 U.S.C.A. §§ 9601, et seq., the National Contingency Plan ("NCP"), 40 C.F.R. Part 300, or any other federal statute, regulation or response program, to respond to and recover costs incurred in response to releases or threats of releases of pollutants and contaminants as deemed necessary in EPA's sole discretion to abate an imminent and substantial endangerment to public health or welfare or the environment at the location stated above.

By making this Request, the Requesting Agency acknowledges that notice pursuant to Section 128(b)(1)(D) of CERCLA, 42 U.S.C. § 9628(b)(1)(D), is not applicable with respect to this removal action. This request does not limit the authority of the California Regional Water Quality Control Board, Central Valley Region to take action pursuant to state law. The signatory of this request is authorized to make this request on behalf of the State.

Executed on this the 10<sup>th</sup> day of August, 2006.

Pamela C. Creedon  
Name Pamela C. Creedon

Executive Officer  
Title

## **POOR LEGIBILITY**

ONE OR MORE PAGES IN THIS DOCUMENT ARE DIFFICULT TO READ  
DUE TO THE QUALITY OF THE ORIGINAL